

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



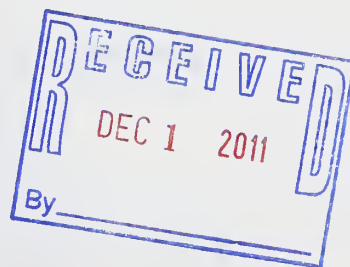
Economic
Research
Service

Economic
Information
Bulletin
Number 86

November 2011

How Much Time Do Americans Spend on Food?

Karen S. Hamrick, Margaret Andrews, Joanne Guthrie,
David Hopkins, and Ket McClelland



12

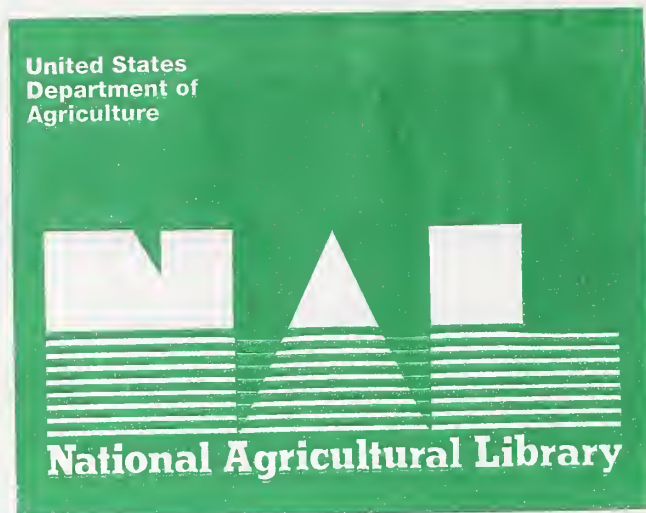
i

2

3



Vis



Recommended citation format for this publication:

Karen S. Hamrick, Margaret Andrews, Joanne Guthrie, David Hopkins, and Ket McClelland. *How Much Time Do Americans Spend on Food?* EIB-86, U.S. Department of Agriculture, Economic Research Service. November 2011.

Use of commercial and trade names does not imply approval or constitute endorsement by USDA.

Cover photo credit: Shutterstock and Thinkstock

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and, where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.



United States
Department
of Agriculture

Economic
Information
Bulletin
Number 86

November 2011



A Report from the Economic Research Service

www.ers.usda.gov

How Much Time Do Americans Spend on Food?

**Karen S. Hamrick, Margaret Andrews,
Joanne Guthrie, David Hopkins, Ket McClelland**

Abstract

This report uses data from the 2006-08 ERS Eating & Health Module of the American Time Use Survey to present an overview of Americans' eating and other food-related time use patterns, including grocery shopping and meal preparation, and teenage time use patterns in relation to school meals. On an average day, Americans age 15 and older spent 67 minutes eating and drinking as a "primary" or main activity, and 23.5 minutes eating and 63 minutes drinking beverages (except plain water) while doing something such as watching television, driving, or working. Eleven percent of the population spent at least 4.5 hours on an average day engaged in eating and drinking activities.

Keywords: Time use, eating patterns, obesity, BMI, school meals, grocery shopping, meal preparation, Food Stamp Program, SNAP, National School Lunch Program, time diary, time use survey, American Time Use Survey, multitasking.

Acknowledgments

The authors would like to acknowledge the support and assistance of our ERS colleagues Jayachandran Variyam and Ephraim Leibtag. We would like to thank Rachel Krantz-Kent, the American Time Use Survey staff, and Dorinda Allard, Bureau of Labor Statistics; David Berrigan, National Cancer Institute; Abigail Okrent, ERS; and Cathleen Zick, University of Utah for helpful comments and suggestions. Special thanks are extended to Dale Simms and Cynthia A. Ray for editorial and design assistance.

Contents

Summary.....	iii
Introduction	1
Methods and Data	1
Eating Behavior—How Many Minutes?	5
Age groups	6
Region.....	6
Extreme groups.....	7
Employment status	7
Work schedule.....	8
Income group and SNAP participation.....	8
Eating Behavior—Where, When, With Whom, and While doing what?	11
Where do Americans eat and drink?.....	11
When do Americans eat and drink?—Time of day.....	12
When do Americans eat and drink—Time of day in the context of other activities	15
When do Americans eat and drink?—Frequency	15
When do Americans eat and drink?—Weekdays, Weekends, and Holidays	16
Whom are Americans with when they eat and drink?	16
What other activities are Americans doing while eating and drinking?.....	20
Time Use Patterns, BMI and General Health	23
General Health	26
Meal Preparation and Grocery Shopping	27
How long does it take?	27
Who does it?	29
Meals obtained at school.....	31
Implications for Future Research.....	34
References.....	36
Appendix tables	39
Appendix—Technical information on calculation of estimates	58

Summary

What Is the Issue?

ERS collected data on Americans' time use patterns and eating, Body Mass Index (BMI), USDA's Supplemental Nutrition Assistance Program (SNAP, formerly the Food Stamp Program, FSP) participation, meals obtained at school, and grocery shopping over 2006-08. The ERS-developed Eating & Health Module of the nationally representative American Time Use Survey was used to collect this information. This report presents extensive summary statistics and analysis using this data for an average day over the 2006-08 period. Single-year estimates of food-related time use patterns have previously been analyzed. However, by studying 3 years of data together, we are able to examine in greater detail various subgroups of the population.

Examining the eating patterns of the U.S. population is a key factor to improving our understanding of the determinants of Americans' nutrition and health. Analyzing the time Americans spend in various activities, and in particular food-related activities, may provide some insight into why nutrition and health outcomes vary over time and across different segments of the population. A better understanding of these factors could improve programs and policies targeted at reducing obesity and improving overall nutrition.

What Did the Study Find?

We looked at time use patterns for Americans age 15 and over and estimated time spent in eating activities. We also analyzed time use patterns by BMI, general health, and SNAP participation, as well as by other characteristics. Our findings include the following:

- On an average day over 2006-08, Americans age 15 and older spent about 2.5 hours eating or drinking. Slightly less than half of that time (67 minutes) was spent eating and drinking as a "primary" or main activity, while the remaining time was spent in eating and drinking while doing something else considered primary such as watching television, driving, preparing meals, or working (78 minutes) and in waiting to eat or traveling to the meal destination (7 minutes). Eleven percent of the population spent at least 4.5 hours on an average day engaged in eating and drinking activities.
- Lower income Americans, those with household incomes less than 185 percent of the poverty threshold, spend less time engaged in eating and drinking activities than those with higher incomes.
- Those who engaged in secondary eating or drinking while driving, working, grooming, or during meal preparation and cleanup had lower-than-average BMIs, while those who engaged in secondary eating while watching television had higher-than-average BMIs.
- Obese individuals, on average, spent just over 3 hours watching television per day, about 37 minutes more than those with normal weight.
- Women were more likely to grocery shop than men on an average day, and spent more time shopping as well.

- Teenagers who do not obtain breakfast or lunch at school engaged in considerably more screentime (non-school computer time and watching television) than teens who do obtain meals at school.

How Was the Study Conducted?

Data for this study come from the Eating & Health Module (EH Module), a supplement to the American Time Use Survey (ATUS). The ATUS is a Bureau of Labor Statistics survey that is conducted by the U.S. Census Bureau. ERS and the National Institutes of Health's National Cancer Institute funded the EH Module, which was fielded from January 2006 to December 2008. ERS compiles, analyzes, and releases the data collected from the EH Module. Over 2006-08, the ATUS and EH Module resulted in a total of 37,832 completed interviews. Weighting factors were used in order to produce nationally representative estimates. The EH Module contains questions on:

- eating patterns;
- height, weight, and health status;
- Supplemental Nutrition Assistance Program (formerly Food Stamp Program) participation, meals obtained at school by household children;
- household income; and
- grocery shopping and meal preparation.

Statistical differences discussed are significant at the 90-percent confidence level.

Introduction

Information on Americans' eating patterns is one key to understanding the issues related to the nutrition and health of the U.S. population. A better understanding of Americans' eating patterns, including the context of their food consumption, can improve programs and policies targeted at reducing obesity and improving overall nutrition and, more generally, inform consumer education, food assistance programs, and product development/marketing. Toward this goal, USDA's Economic Research Service (ERS) developed, with joint funding by ERS and the National Cancer Institute, a supplement to the nationally representative American Time Use Survey (ATUS). This supplement—the Eating & Health Module (EH module) fielded over 2006-08—contained questions on eating patterns, Body Mass Index (BMI), participation in and income eligibility for food and nutrition assistance programs, grocery shopping, and meal preparation.

This report presents national statistics using EH module data on time use patterns related to eating, health, grocery shopping, and meal preparation. Annual estimates from the 2006-08 American Time Use Survey have previously been reported by ERS,¹ but analysis of 3 years' of consecutive data can provide greater detail on various subgroups of the population. In addition, the pooled 2006-08 data smooth the year-to-year variation that resulted from a change in the survey instrument.

Methods and Data

The Bureau of Labor Statistics' ATUS began in 2003 and is ongoing, with the U.S. Census Bureau conducting the interviews.² One individual age 15 or older from each sampled household is interviewed about his or her activities for the 24-hour period from 4 am the day before the interview to 4 am of the interview day. Survey respondents are asked to identify their primary activity (if they were engaged in more than one activity at a time), where they were, and whom they were with. All ATUS respondents were also included in the Bureau of Labor Statistics' Current Population Survey (CPS), and their household labor force participation information from the CPS is updated during the ATUS interview. As a consequence, ATUS data include time diary, demographic, labor force participation, and household information.

The Eating & Health Module was fielded from January 2006 to December 2008. The ATUS collects over 12,000 completed interviews each year. Over 2006-08, the ATUS and EH Module resulted in 37,832 completed interviews of individuals age 15 or over.³ Weighting factors calculated by the U.S. Census Bureau applied to the individual ATUS and EH Module respondent data produce nationally representative estimates for an average day over 2006-08.

The EH Module contains questions on eating patterns; height, weight, and health status; Supplemental Nutrition Assistance Program (SNAP, formerly Food Stamp Program) participation and income; meals obtained at school by household children; and grocery shopping and meal preparation (see box, "ATUS Eating and Health Module Questions"). The ATUS asks respondents to report only their primary, or main, activities.⁴ However, Americans often

¹Estimates for each year over 2006-08, documentation, and the microdata files are available at <http://ers.usda.gov/Data/ATUS/>

²The ATUS conducts interviews every day of the year except Thanksgiving and Christmas

³Some respondents completed the ATUS survey but not the EH Module questions. Over 2006-08, there were a total of 82 of these cases, or 0.2 percent of ATUS respondents.

⁴The ATUS collects information on simultaneous childcare but does not ask about any other multitasking or secondary activity.

ATUS Eating and Health Module Questions

Eating as a secondary activity

Because many Americans eat while engaged in other activities, such as driving or watching television, information is needed on eating as both a primary and secondary activity.

Question: We're interested in finding out more about how people fit meals and snacks into their schedules. Yesterday, you reported eating or drinking between [fill times from respondent's time diary]. Were there any other times you were eating yesterday—for example while you were doing something else? About how long would you say you were eating while you were [fill activity]? Not including plain water, were there any other times yesterday when you were drinking any beverages? About how long would you say you were drinking while you were [fill activity]?

Grocery shopping and meal preparation

Question: I'd like to ask a couple of questions about food preparation. Are you the person who usually does the grocery shopping in your household? Are you the person who usually prepares the meals in your household?

Food Stamp Program participation

This information allows analysis of the time use patterns of food stamp recipients versus others, particularly low-income persons who are not participating in the program.

Question: In the past 30 days, did you or anyone in your household get food stamp benefits?

Breakfast and lunch obtained at school

Question: Please think back over the past week starting last [day of week] up to today, [day of week]. In the past week, did [fill names of children in the household under age 18] eat a BREAKFAST that was prepared and served at a school, a paid day care or Head Start center, or a summer day program? This question refers to ONLY BREAKFASTS prepared at the school or center—not meals brought from home.

What about LUNCH? In the past week, did [fill names of children in the household under age 18] eat a LUNCH that was prepared and served at a school, a paid day care or Head Start center, or a summer day program? This question refers to ONLY LUNCHES prepared at the school or center—not meals brought from home.

Height, weight, and general health

From this self-reported information, Body Mass Index (BMI) can be calculated, and time use patterns, such as activity levels and eating patterns, can be analyzed by BMI levels.

Question: I'm going to switch topics and ask you a few final questions about your physical health that might affect how you use your time. In general, would you say that your health is Excellent, Very Good, Good, Fair, or Poor? How tall are you without shoes? How much do you weigh without shoes?

Household income

This question asks if total household income before taxes was above or below a certain amount. The ATUS Computer Assisted Telephone Interviewing software automatically calculates the dollar amount of 185 and 130 percent of the poverty threshold based on the respondent's household composition. These income thresholds determine income eligibility for food assistance programs.

Question: Last month, was your total household income before taxes more or less than [fill 185 percent of poverty threshold] per month?

If answer was LESS:

Was it more or less than [fill 130 percent of poverty threshold] per month?

A text version of the Eating & Health Module questionnaire is available at <http://www.bls.gov/tus/ehmquestionnaire.pdf>

eat and drink while engaged in another activity—like watching television, driving a vehicle, working, or grooming—that the individual considers as primary. By determining and analyzing the time spent in both primary and secondary eating/drinking, a more complete picture of Americans' eating patterns emerges.

The ATUS and EH Module provide information about eating/drinking behavior that has not been available before for nationally representative data. The ATUS is a time use survey, and so does not include food intake information. Nonetheless, the data provide important information on eating/drinking duration, frequency, and context that allows for the characterization of eating patterns across different groups.

Because Americans' time use patterns do not change much from year to year, the ATUS and EH Module data can be pooled over years to obtain estimates of average time use behavior. However, a survey instrument change in October 2006 in the EH Module resulted in increased estimates of time spent in secondary eating and secondary drinking. As of October 2006, respondents could report that they were engaged in secondary eating and/or drinking "all day," excluding time spent in primary eating and sleeping, instead of reporting secondary eating and/or drinking for each of their day's activities. This short-answer option of "all day" resulted in an increase in the average time spent in secondary eating and secondary drinking from 2006 to 2008, while the percentage of people engaged in any secondary eating or drinking remained constant. Pooling the data over 3 years mitigates the methodology issues.⁵

Estimates of average time use are presented here using different age cutoffs for different activities. Statistics in the Eating Behavior sections on average time spent eating and drinking are presented for those age 15 and over, utilizing the entire dataset. (Average time estimates for the population age 18 and over are also provided in the tables for readers who are interested in average time spent by adult Americans.) In the Time Use Patterns, BMI, and General Health sections, estimates of time spent by BMI are calculated for those age 20 and older to correspond with the Centers for Disease Control and Prevention adult interpretation of BMI. Most estimates concerning meal preparation and grocery shopping are for adults age 18 and over. In addition, SNAP (formerly FSP) defines adults as those age 18 or older, so this cutoff is appropriate for SNAP/FSP statistics. Finally, time use estimates pertaining to meals obtained at school are for those adults age 19 and older in households with school-age children or youth, or those age 15-18 who are in school. This cutoff is because teenagers who are in high school and are age 18 can obtain meals at school (see box, "Age Groups Used in Report Statistics").

All estimates are for an average day over 2006-08. This measure provides a way to see time allocation across the population. However, many activities are not done on a daily basis, and some activities are never done by some individuals. Grocery shopping and exercise are examples of activities that exhibit day-to-day variation for an individual's time use, and also variation among individuals' time use. These estimates are then a snapshot, short-term measure of Americans' time use. All estimates calculated from the ATUS time diaries, and the ATUS and EH Module questionnaires are of self-reported information.

⁵See <http://www.ers.usda.gov/Data/ATUS/Documentation.htm> for more information on the survey instrument change.

Age Groups Used in Report Statistics

Report section	Age group	Reason
Eating Behavior— How Many Minutes?	15 years old and over, tables and text Note: 18 years old and over included in tables	Utilizes entire dataset
Eating Behavior— Where, When, With Whom, and While Doing What?	15 years old and over, tables and text Note: 18 years old and over included in tables	Utilizes entire dataset
Time Use Patterns, Body Mass Index (BMI) and General Health	20 years old and over	Adult BMI interpretation is for age 20 and over
Meal Preparation and Grocery Shopping		
How long does it take?	18 years old and over	Adults are of interest, Supplemental Nutrition Assistance Program (SNAP)/Food Stamp Program (FSP) definition of adult
Who does it?	18 years old and over	Adults are of interest, SNAP/FSP definition of adult
Meals obtained at school	19 years old and over, and 15-18 years old and in school	Adults beyond high school age with school-age chil- dren/youth in household, and teens in school

Eating Behavior—How Many Minutes?

On an average day over 2006-08, Americans age 15 or older spent an average (mean) 67 minutes engaged in primary eating and drinking (the ATUS does not separately report primary eating versus primary drinking), that is, eating and drinking as a main activity. An additional 23.5 minutes were spent in secondary eating, that is, eating while engaged in another activity considered primary, and 63 minutes in secondary drinking of beverages other than plain water (table 1, appendix table 1). Men spent 69 minutes in primary eating and drinking, whereas women spent only 65 minutes.⁶ The time spent in secondary eating was about the same for men and women. Americans spent, on average, an additional 7 minutes in other activities associated with primary eating—travel to a meal location and waiting for food. Thus, the

⁶Statistical differences described in the text are significant at the 90-percent confidence level.

Table 1
Time spent in eating and drinking and percent of population age 15+ (18+) and older engaged in each activity, on an average day over 2006-08

	Average minutes per day, civilian population			Average percentage engaged in activity per day			Average minutes per day, for persons who engaged in the activity		
	<i>Minutes</i>			<i>Percent</i>			<i>Minutes</i>		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
AGE 15 and older									
Total time in primary eating and drinking	66.9	68.6	65.2	95.9	96.2	95.6	69.7	71.4	68.2
Total time in associated activities	7.4	7.9	6.9	25.6	27.3	24.1	28.9	29.1	28.7
Secondary eating	23.5	22.8	24.1	52.5	48.4	56.3	44.7	47.0	42.9
Secondary drinking	63.1	59.1	66.9	35.4	33.0	37.5	178.5	178.8	178.3
Total secondary eating and drinking (adjusted for overlap)	77.7	73.5	81.6	53.9	49.9	57.7	144.1	147.3	141.5
Total time in all eating & drinking activities	152.0	150.1	153.8	NA	NA	NA	242.7	247.7	238.4
AGE 18 and older									
Total time in primary eating and drinking	67.8	69.6	66.0	96.0	96.2	95.8	70.6	72.4	68.9
Total time in associated activities	7.4	8.0	6.9	25.7	27.5	24.0	28.9	29.1	28.7
Secondary eating	23.9	23.1	24.6	52.1	48.2	55.7	45.9	48.0	44.2
Secondary drinking	65.1	61.0	68.9	35.5	33.1	37.7	183.5	184.1	183.1
Total secondary eating and drinking (adjusted for overlap)	79.7	75.4	83.8	53.6	49.7	57.2	148.8	151.6	146.5
Total time in all eating & drinking activities	154.9	153.0	156.7	NA	NA	NA	248.3	253.2	244.0

NA = Not applicable.

Notes: A primary activity refers to an individual's main activity.

Primary eating & drinking includes Eating and drinking (110101 and 110199), Eating and drinking not elsewhere classified (119999) and Eating and drinking as part of job (050202).

Travel times not included except in associated activities.

Total secondary eating and secondary drinking time (adjusted for overlap) is one-half the sum of the total time assuming all overlap (secondary eating & drinking occur at the same time during a primary activity) plus the total time assuming no overlap (secondary eating & drinking occur during the same primary activity, but not at the same time).

Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

average total time spent in eating and drinking activities was 152 minutes (2.5 hours). (Average times were essentially the same for those age 18 or older as for those 15 or older. See Appendix for technical information on how estimates were calculated.)

Ninety-six percent of Americans engaged in primary eating and drinking on an average day, 52.5 percent in secondary eating, and 35 percent in secondary drinking. Since almost all Americans engage in primary eating and drinking on an average day, the average time spent by “participants”—those who engage in an activity, in this case primary eating and drinking—was 70 minutes, about the same as the average over the population, 67 minutes. However, since secondary eating and drinking had a lower share of participation, participant times were considerably higher than the total population averages. Of those who engaged in secondary eating, the average time spent was 45 minutes, and for secondary drinking, 178.5 minutes (just under 3 hours).

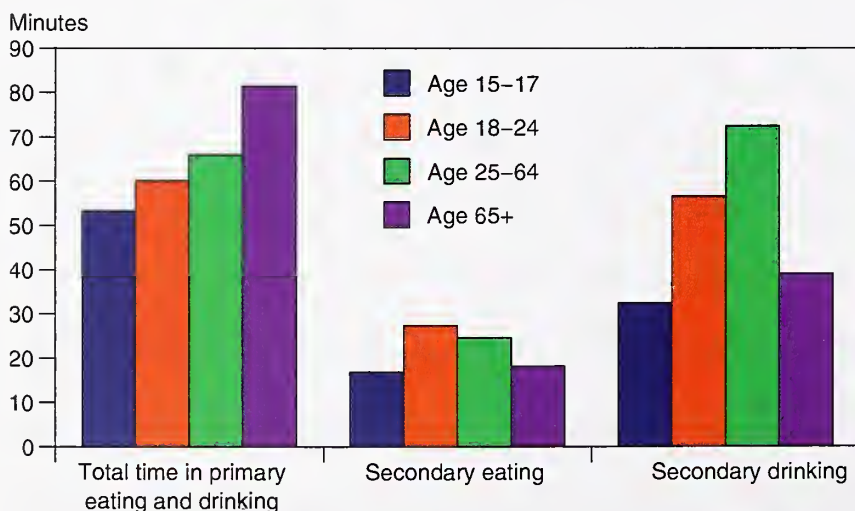
Age Group

Individuals age 65 and over spent considerably more time in primary eating and drinking than other age groups—81.5 minutes on an average day—and less time in secondary eating and secondary drinking than did those age 18-64. Teenagers (age 15-17) spent the least amount of time in primary/secondary eating/drinking (fig. 1, appendix table 2).

Region

Time spent in eating/drinking activities showed some variation across regions (appendix table 3). Individuals residing in metro and nonmetro areas spent about the same amount of time in primary eating and drinking and in secondary eating, though respondents in nonmetro areas spent more time

Figure 1
**Time spent in eating activities by age group,
on an average day over 2006-08**



Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

in secondary drinking—73 minutes versus 61 minutes for metro residents. Respondents in the Northeast and West spent more time in primary eating and drinking than those in the Midwest or South.

Extreme Groups

EH module data allow analysis of those with extreme time behavior with respect to eating activities. Of particular interest are *constant grazers*, those who spent at least 4.5 hours a day (about twice the 2006 average time) on primary or secondary eating or drinking activities, those with *no primary eating and drinking*, and those who reported that they engaged in secondary eating and/or secondary drinking “all day.”

Constant grazers, who made up 11 percent of the population age 15 and over, spent 75 minutes engaged in primary eating and drinking, 133 minutes (2.2 hours) in secondary eating, and 483 minutes in secondary drinking (8 hours). Constant grazers had a slightly lower rate of engaging in primary eating and drinking than the total population, but much higher rates of engaging in secondary eating (93 percent) and secondary drinking (90 percent). Constant grazers’ average BMI was 27.3, which is not statistically different from the total population average BMI of 27.1, and represents only a 1-pound difference in weight for a person 5’ 6” tall. Both BMI values are above the minimum for overweight (25.0).

Four percent of the population reported no primary eating and drinking (table 1), though they engaged in secondary eating and secondary drinking at much higher rates (82 percent for secondary eating and 63 percent for secondary drinking) than the total population and spent much longer doing so—51 minutes in secondary eating and 138 minutes (2.3 hours) in secondary drinking. So, clearly this group offsets the time saved on meals with secondary snacking over the course of the day.

In October 2006, “all day” became a response option for the secondary eating and secondary drinking questions.⁷ “All day” does not include sleep time or time spent in primary eating. Those who reported that they engaged in secondary eating and/or secondary drinking “all day” had shorter average times spent in primary eating than the total population. This reporting change did not have much effect on average secondary eating times, but increased average time reported for secondary drinking, a less defined activity than secondary eating. If an individual takes a sip of coffee once every 10 or 15 minutes over 3 hours, is that 3 hours of secondary drinking? Since the data are self-reported, it is the respondent’s view of what constitutes coffee drinking that determines how the survey question is answered. Thus, the responses reflect how individuals view their food consumption behavior.

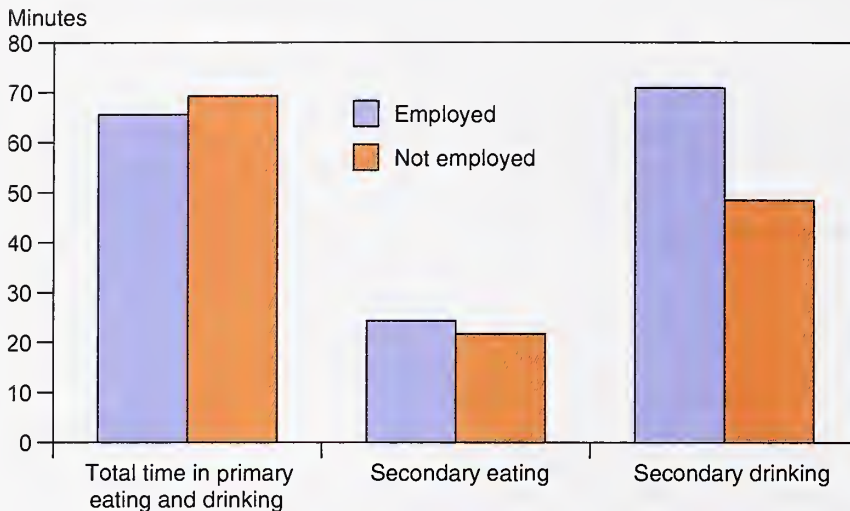
Employment Status

Those employed spent less time in primary eating and drinking and more time in secondary eating/drinking than those not employed (fig. 2). The difference in secondary drinking times is considerable—71 minutes for those employed versus 48.5 minutes for those not employed.

⁷See <http://www.ers.usda.gov/Data/ATUS/Documentation.htm> for more information on the survey instrument change.

Figure 2

Time spent in eating activities by employment status, on an average day, 2006-08, age 15+



Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Work Schedule

Of those who are employed, does when they work make a difference in their eating/drinking behavior over the day? Figure 3 and appendix table 4 show the time spent in eating and drinking activities for employed workers by their work shift. This analysis includes only those respondents who were employed and engaged in paid work at their workplace on their diary day.⁸ On an average day, not all employed persons would be working.

Those who performed at least half of their paid work time at their workplace between 8 am and 4 pm are classified as day shift workers, between 4 pm and 12 am (midnight) as evening shift workers, and between 12 am (midnight) and 8 am as night shift workers.⁹ Those who worked day shifts spent more time in primary eating and drinking than those in other shifts, perhaps due to their standard schedules.

Income Group and SNAP Participation

The EH Module data indicate whether the respondent's household income was above or below 185 percent/130 percent of the poverty threshold. These levels correspond with the income eligibility thresholds for reduced-price school meals and for the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) (185 percent), and for free school meals and SNAP¹⁰ (130 percent).¹¹

Those with household income greater than 185 percent of the poverty threshold spent more time in all eating/drinking activities than those with incomes below 185 percent (fig. 4.) The greater amounts of time spent in secondary eating and drinking are likely due to the fact that those with higher incomes are more likely to be employed than those with lower incomes. In

⁸The analysis includes a small number of individuals who engaged in unpaid work for a family business (for fewer than 15 hours/week) or who were not employed but engaged in job search activities, such as interviewing for jobs.

⁹Those who did not have a majority of their paid work time at their workplace in any one shift were not included in the analysis. Only those with a minimum of 1 hour of paid work done at the workplace were included. Otherwise, the definitions of work schedules in Polivka (2008) were used. Because the ATUS time diary is from 4 am to 4 am, night shift workers are identified as those who performed at least half of their paid work at their workplace between 4 am and 8 am and/or between 12 am (midnight) and 4 am.

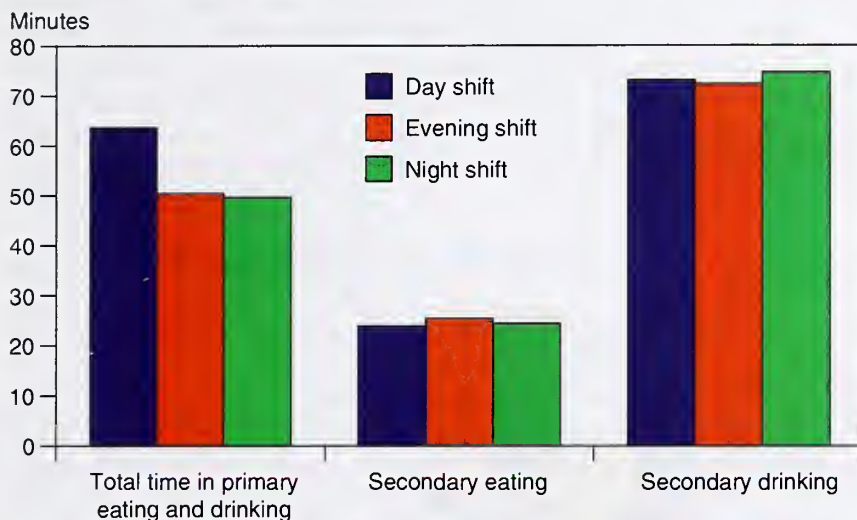
¹⁰Current regulations allow States to raise gross income eligibility standards above the Federal standard under some circumstances.

¹¹See USDA Food and Nutrition Service for more information on food and nutrition assistance programs and eligibility, <http://www.fns.usda.gov/fns/>.

addition, those with higher incomes were more likely to eat out at a restaurant or bar—23 percent of those with higher incomes ate at a restaurant on an average day, versus 13 percent of individuals with household incomes less than 185 percent of the poverty threshold.

Figure 3

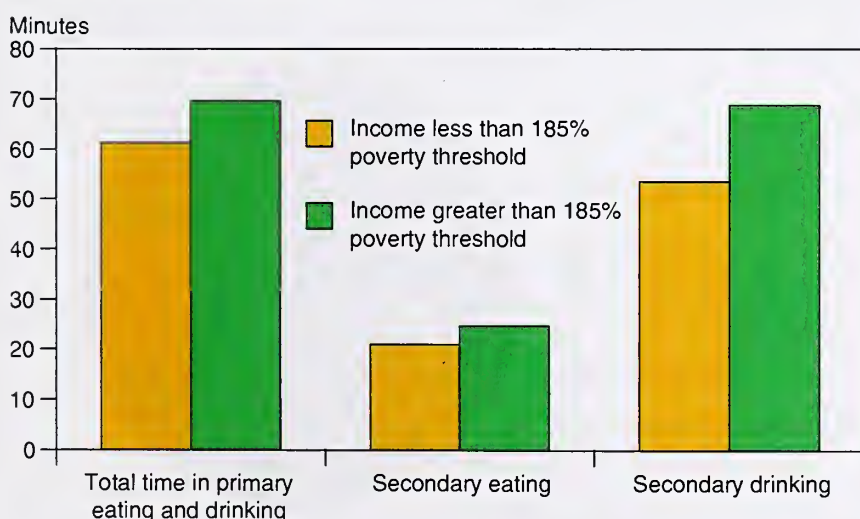
Time spent in eating/drinking activities by work shift, on an average day worked 2006-08, age 15+



Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Figure 4

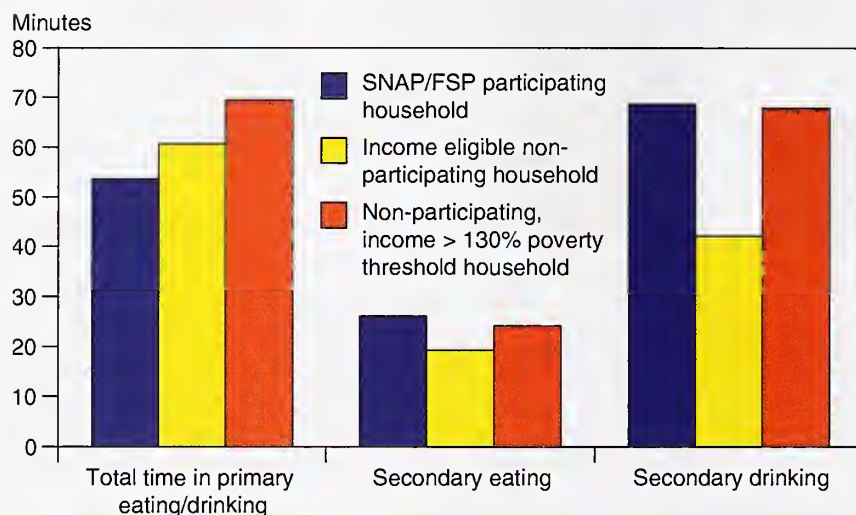
Time spent in eating/drinking activities by income group, average day 2006-08, age 15+



Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Individuals in SNAP/FSP households spent less time in primary eating and drinking and secondary drinking than income-eligible (household income less than 130 percent of the poverty threshold) nonparticipating households (fig. 5).^{12,13} Higher income, non-SNAP individuals spent more time in primary eating than the other groups, perhaps due to more eating out. Indeed, 22.5 percent of this group ate at a restaurant on an average day, versus 9 percent of those in SNAP/FSP households and 13 percent of those in income-eligible nonparticipating households. This is consistent with the SNAP/FSP program structure, which requires that benefits be used to purchase food for at-home consumption.

Figure 5
Time spent in eating/drinking activities by SNAP/FSP status, on an average day 2006-08, age 15+



SNAP = Supplemental Nutrition Assistance Program; FSP = Food Stamp Program.
Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

¹²The Food Stamp Program (FSP) was renamed the Supplemental Nutrition Assistance Program (SNAP) as of October 1, 2008. The ATUS and EH Module data were collected from January 2006 to December 2008, so most of the data collection took place when the program was the FSP. However, since SNAP is the current program name, *SNAP* or *SNAP/FSP* is used here.

¹³Estimates in this report should not be used to estimate the number of SNAP/FSP participants or case loads for a variety of reasons, including that the ATUS and EH Module data include only those age 15 and over, and so do not contain the entire SNAP/FSP population. See Hamrick (2010, p. 13) for more information.

Eating Behavior—Where, When, With Whom, and While Doing What?

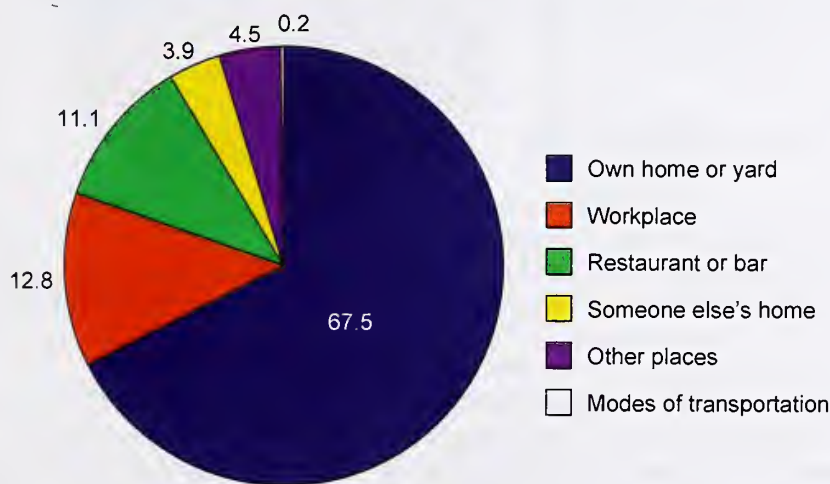
Understanding Americans' eating patterns over the course of a day, not just a summary snapshot of the day, provides a detailed picture of eating behavior. How many times a day do Americans engage in eating or drinking? What times of day are they eating or drinking? It is also useful to understand the context of eating patterns. Where are individuals when they are eating/drinking? Whom are they with? What are their primary activities while they are engaged in secondary eating or drinking? All of this information together highlights differences in eating patterns across groups, particularly body mass index (BMI) groups. There is extensive literature devoted to Americans' eating patterns,¹⁴ especially as they affect obesity. Some researchers have found that context, or environment, plays a role in America's obesity problem;¹⁵ the ATUS/EH data are a rich source of eating context information.

Where Do Americans Eat and Drink?

Over two-thirds of Americans' primary eating and drinking occurrences, on an average day in 2006-08, took place at home (fig. 6a). The next most frequent primary eating and drinking location (13 percent) was at the workplace. A close third is a restaurant or bar, at 11 percent. Only 4 percent of eating/drinking occurrences took place in someone else's home. The remaining primary eating and drinking occurrences took place at a variety of locations and in transportation modes, with no single location having more than 2 percent of total occurrences.

Figure 6a

Where primary eating/drinking takes place, percent of occurrences, 2006-08, age 15+



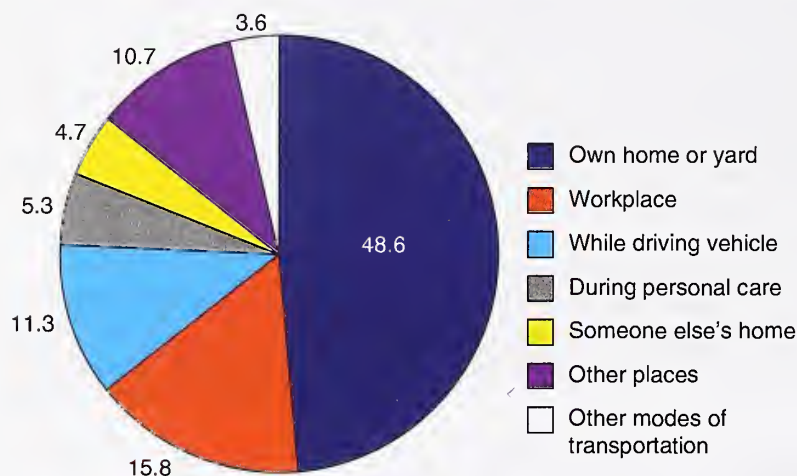
Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

¹⁴See Ma et al., 2003; and Howarth et al., 2007.

¹⁵See French, Story, and Jeffery, 2001; and Guthrie, Lin, and Frazão, 2002.

Figure 6b

Where secondary eating/drinking takes place, percent of occurrences, 2006-08, age 15+



Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

For secondary eating and drinking, 49 percent of occurrences took place at home (fig. 6b) and 16 percent at the workplace. The third most frequent location (11 percent) was while driving. Five percent of secondary eating/drinking occurrences took place while individuals were engaged in personal care (location is not reported for personal care activities), and another 5 percent while at someone else's home.

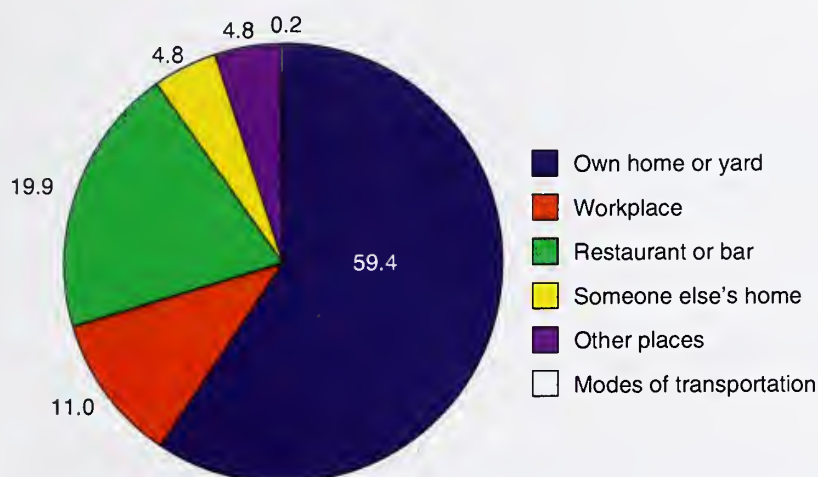
Though restaurants or bars accounted for only 11 percent of eating/drinking occurrences, they represented 20 percent of the time spent in primary eating and drinking (fig. 7a), indicating more leisurely occurrences. For secondary eating/drinking (fig. 7b), the main difference in the percentages of occurrences and time spent is at the workplace—16 percent of occurrences versus 27 percent of time spent.

When Do Americans Eat and Drink?—Time of Day

Americans have two peak times for eating and drinking—noon to 1 pm and 6 to 7 pm—when 40 percent or more of Americans are engaged in primary or secondary eating/drinking (fig. 8). The morning peak is from 7 to 8 am, and is not as pronounced for primary eating and drinking as the later peaks. For the 13 hours from 9 am to 10 pm, 5-10 percent of Americans are engaged in secondary eating, and likewise 5-10 percent are engaged in secondary drinking. Men and women have similar eating/drinking patterns over the course of the day; however, women are more likely than men to be engaged in eating/drinking in the morning and in the afternoon, and less likely overnight from 11 pm to 7 am (fig. 9). This finding correlates with the fact that men are more likely than are women to work on night shift jobs, according to analysis of the ATUS data (Polivka, 2008).

Figure 7a

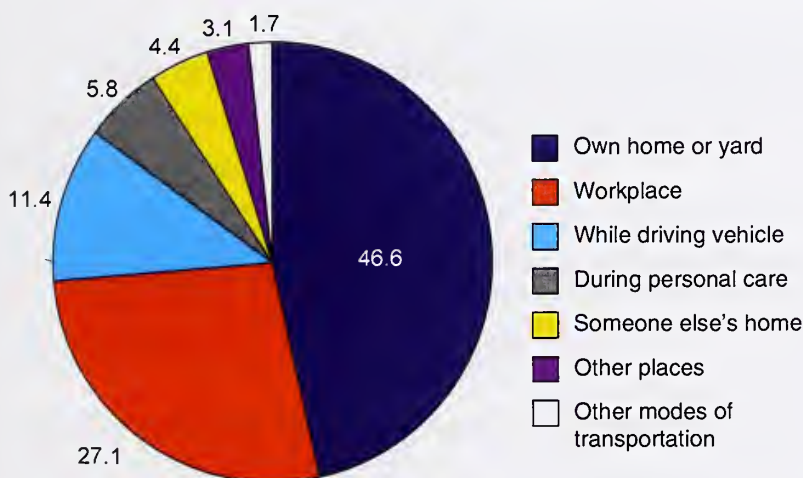
Where primary eating/drinking takes place, percent of time spent, 2006-08, age 15+



Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Figure 7b

Where secondary eating/drinking takes places, percent of time spent, 2006-08, age 15+

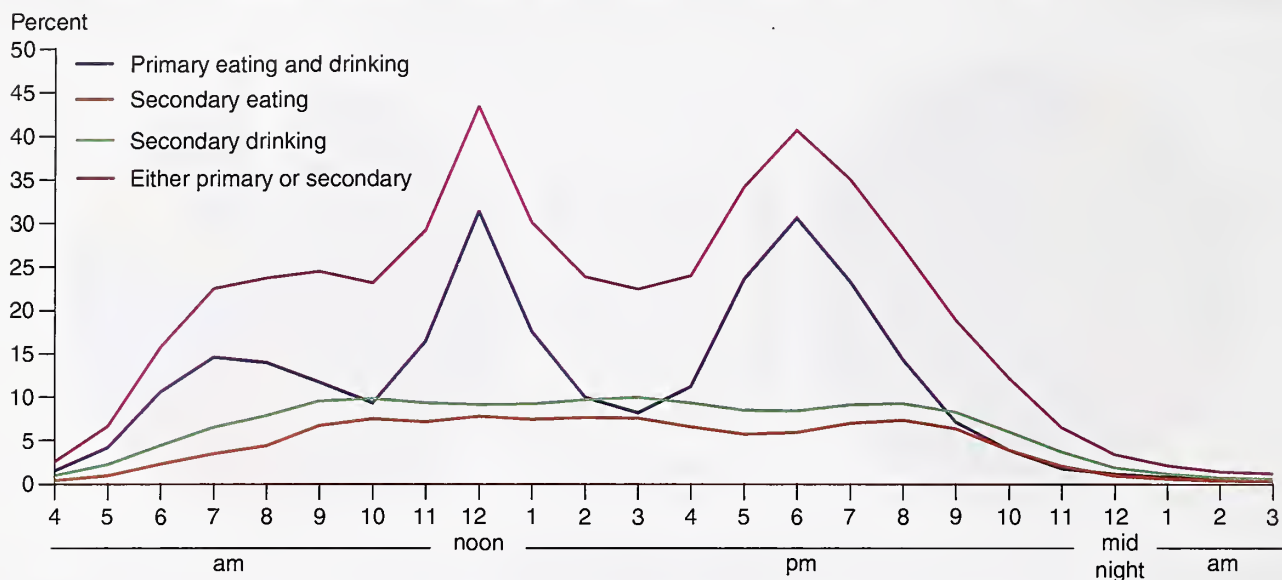


Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

The primary eating and drinking patterns for constant grazers are the same as others' in terms of when they eat/drink as a main activity. However, 20 percent of this group was engaged in secondary eating during any given hour from 9 am to 10 pm (fig. 10), whereas only about 5 percent of the rest of Americans were engaged in secondary eating during those 12 hours. Also, over 50 percent of the constant grazers were engaged in secondary drinking at any time over this same time period.

Figure 8

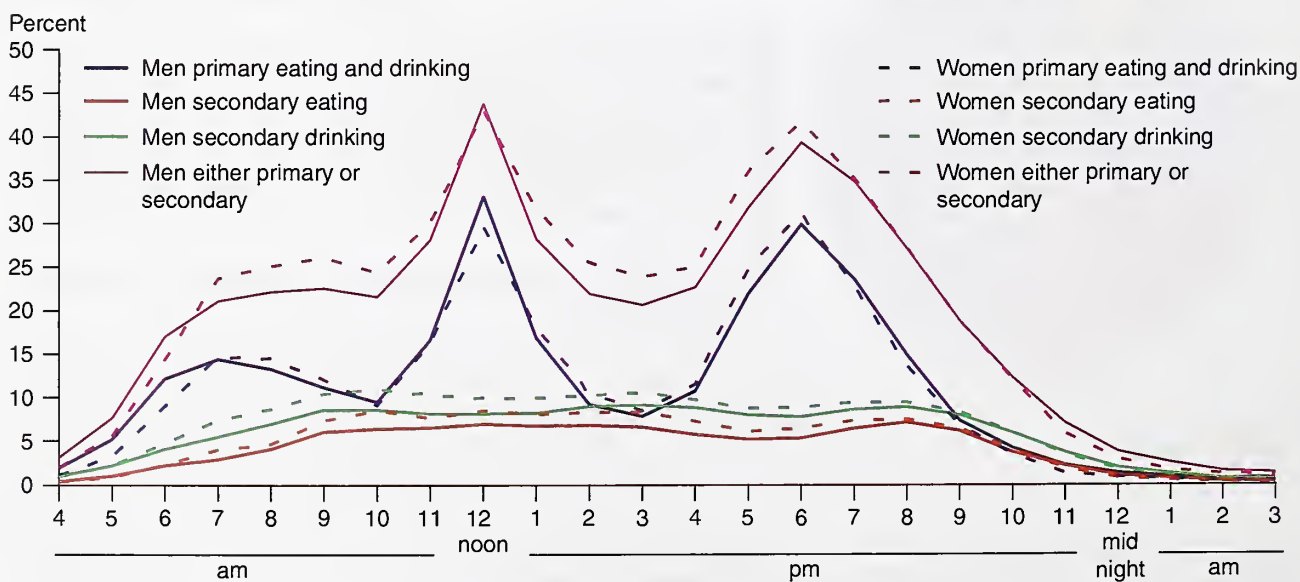
Percentage of Americans engaged in eating and drinking by time of day, 2006-08, age 15+



Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Figure 9

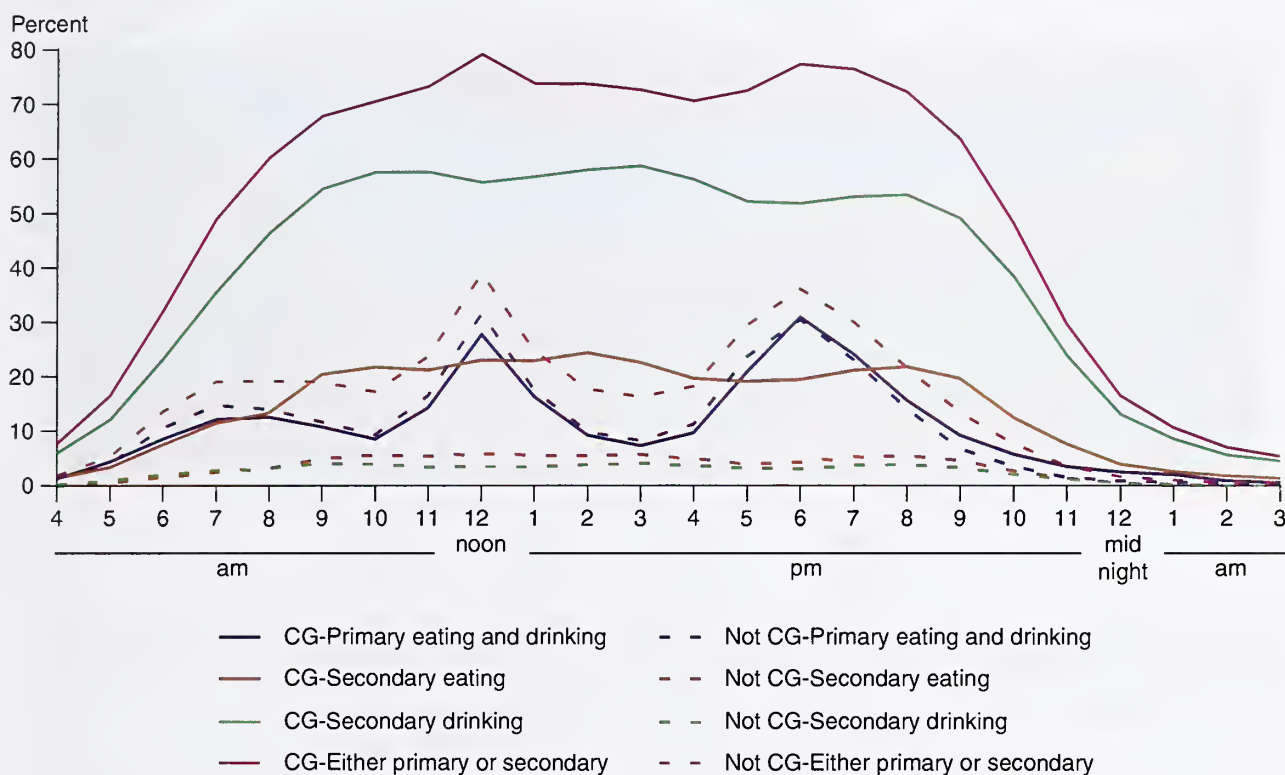
Percentage of Americans engaged in eating and drinking by time of day, 2006-08, age 15+, by gender



Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Figure 10

Percentage of constant grazers engaged in eating and drinking by time of day, 2006-08, age 15+



Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

When Do Americans Eat and Drink—Time of Day in the Context of Other Activities

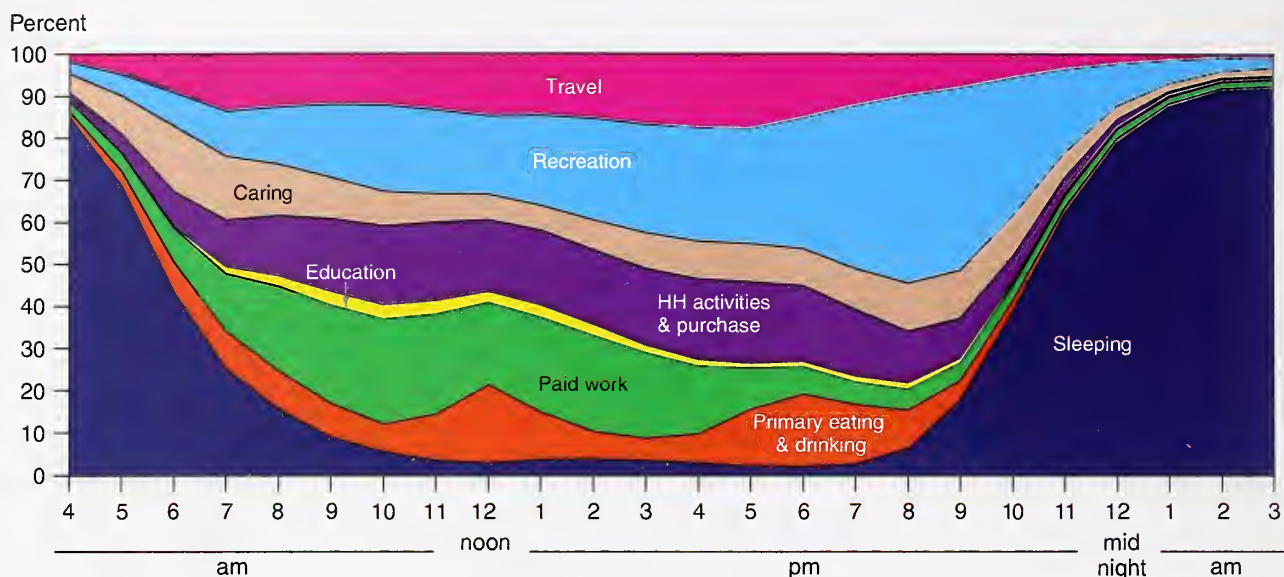
Time spent sleeping dominates all activities over much of the day (fig. 11), with over 90 percent of Americans age 15 and over asleep between 2 am and 3 am.¹⁶ Primary eating and drinking peak at noon and 6 pm, and other activities adjust around this activity. For example, the paid work and caring activity bands narrow at noon as more Americans focus on lunch.

When Do Americans Eat and Drink—Frequency

On an average day over 2006-08, Americans age 15 and over had an average of 2 primary eating and drinking occurrences, 0.8 secondary eating occurrence, and 1 secondary drinking occurrence (table 2). This totals to about four eating/drinking occurrences (not adjusting for possible overlap of secondary eating/drinking) per person. The average number of eating occurrences was consistent across subgroups, though men had fewer occurrences (3.7) than women (4.2). Also, Americans had more eating/drinking occurrences on weekdays (4.0) than on weekends/holidays (3.8). Those employed had more eating/drinking occurrences than those not employed: 4.0 versus 3.7. Employed persons had fewer primary eating and drinking occurrences but more secondary eating/drinking occurrences than those not employed.

¹⁶Sleeping is defined as ATUS activities 0101xx. Primary eating & drinking is 1101xx, 119999, and 050202. Paid work is all of 05xxxx except 050202. Educational activities is 06xxxx. Household purchasing activities is 02xxxx, 07xxxx, 08xxxx, 09xxxx, and 16xxxx. Caring activities—for self & others is 0102xx, 0103xx, 0104xx, 019999, 03xxxx, and 04xxxx. Recreational and other activities is 10xxxx, 1102xx, 12xxxx, 13xxxx, 14xxxx, 15xxxx, and 50xxxx. Travel is 18xxxx.

Figure 11
Percent of Americans engaged in activities by time of day, 2006-08, age 15+



Percentages here will not match percentages in the previous section. Because individuals may engage in more than one primary activity in a given hour, the sum of the percentages adds to more than 100 percent. The chart above re-indexes the percentages of the activities so that the sum adds to 100 percent. All primary activities are included in the eight major categories.

Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

When Do Americans Eat and Drink?—Weekdays, Weekends, and Holidays

Eating/drinking behavior differences between weekdays and weekends/holidays¹⁷ are as expected—both men and women spend more time in primary eating on weekends/holidays than on weekdays (fig. 12). Secondary eating/drinking is about the same between the weekdays and weekends/holidays for both men and women. So, Americans spent less time eating/drinking on weekdays but had more eating occurrences, and had fewer eating occurrences on the weekends, but spent more time engaged in eating/drinking.

Whom Are Americans With When They Eat and Drink?

Not surprisingly, people who live alone were more likely to eat alone over 2006-08. Individuals in single-person households ate alone for primary eating and drinking 71 percent of the time (fig. 13a). For secondary eating/drinking, 58 percent of the time they ate or drank alone, and an additional 23 percent of secondary eating/drinking occurrences were at work or while grooming (or other personal care) (fig. 13b). (The ATUS does not collect information on whether the respondent was alone or with someone while at work or engaged in a personal activity.)

¹⁷Weekdays are Monday through Friday; weekends are Saturday and Sunday; holidays are New Year's Day, Easter, Memorial Day, Fourth of July, Labor Day, Thanksgiving, and Christmas.

Table 2

Frequency of eating occurrences, on an average day, 2006-08

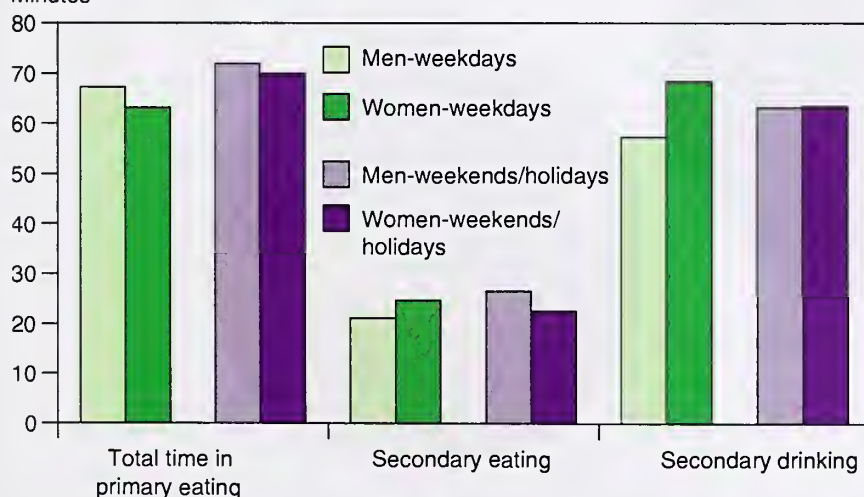
Number of eating/ drinking occur- rences on an aver- age day, 2006-08	Primary eat- ing/drinking occurrences	Secondary eating occur- rences	Secondary drinking occurrences	Simple total (not adjusted for possible overlap)
Age 15+				
Total population	2.04	0.83	1.06	3.90
Men	2.08	.74	.88	3.70
Women	2.01	.92	1.23	4.16
Employed	2.02	.87	1.14	4.03
Not employed	2.10	.76	.91	3.77
Metro	2.04	.84	1.02	3.90
Nonmetro	2.07	.78	1.23	4.08
Weekdays	2.09	.84	1.08	4.01
Weekends	1.94	.80	1.02	3.76
Age 18+				
Total population	2.05	.83	1.08	3.96
Men	2.08	.74	.90	3.72
Women	2.02	.92	1.26	4.20
Employed	2.02	.87	1.15	4.04
Not employed	2.10	.75	.94	3.79
Metro	2.04	.84	1.05	3.93
Nonmetro	2.08	.78	1.24	4.10
Weekdays	2.09	.84	1.10	4.03
Weekends	1.94	.80	1.04	3.78

Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Figure 12

**Time spent in eating/drinking activities, weekdays and weekends/
holidays, by sex, on an average day over 2006-08, age 15+**

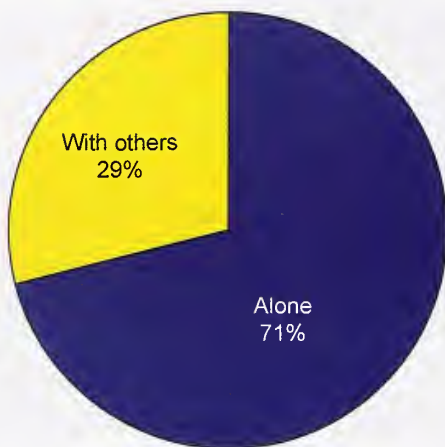
Minutes



Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Figure 13a

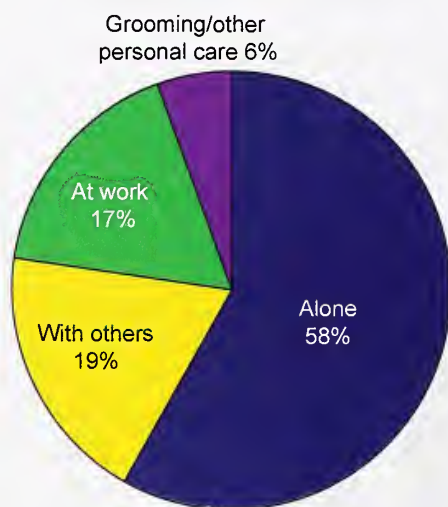
Single-person households, 2006-08, primary eating



Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Figure 13b

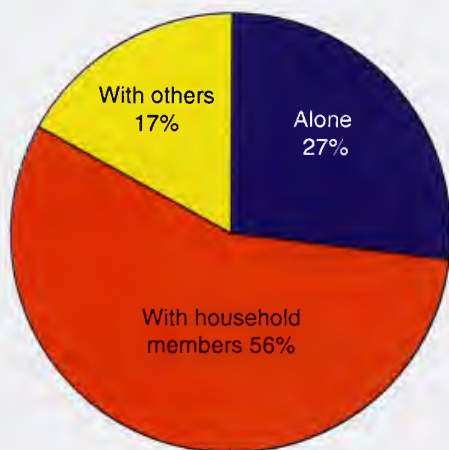
Single-person households, 2006-08, secondary eating/drinking



Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

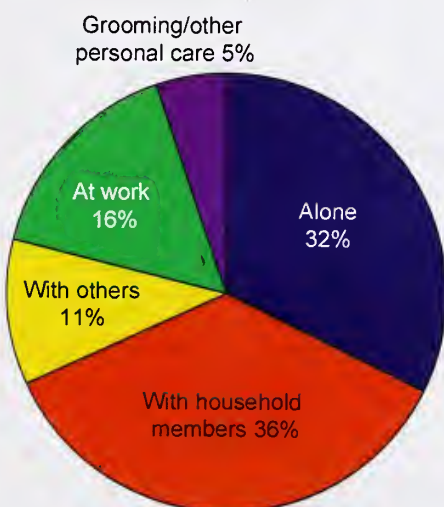
People in multi-person households (two or more people) ate with household members 56 percent of the time for primary eating and drinking, and 36 percent of the time for secondary eating/drinking (figures 14a and 14b). About a third of secondary eating/drinking occurrences were alone. Twenty-one percent of secondary eating/drinking occurrences were at work or while grooming, about the same as for those who live alone.

Figure 14a
Multi-person households, 2006-08, primary eating



Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Figure 14b
Multi-person households, 2006-08, secondary eating/drinking



Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

What Other Activities Are Americans Doing While Eating and Drinking?

The ATUS includes over 400 detailed activities used in the coding of time diaries. Over 2006-08, secondary eating and drinking occurred in all of those activities except sleeping and primary eating and drinking. By far, the activities that most often accompanied secondary eating/drinking were watching television (17 percent of occurrences) and engaging in paid work (15.5 percent). The next most frequent were socializing with others (5 percent), self-grooming (5 percent), and food and drink preparation (4 percent).

Table 4 provides the characteristics of those who engaged in secondary eating/drinking by the most prevalent primary groups of activities—secondary eating while driving, working, watching television, preparing meals or meal cleanup, and grooming. Secondary eating is a more defined activity than secondary drinking, and so is a stronger indicator of eating/drinking behavior. Also included is the average body mass index (BMI) of those who engaged in secondary eating for each activity to determine if different types of multi-tasking are associated with different eating patterns or with different BMIs.

Those who engaged in secondary eating while driving, working, watching television, preparing meals/meal cleanup, or grooming spent roughly 10 minutes less in primary eating and drinking on an average day than the total population. As expected, this group spent much longer, on average, in secondary eating and drinking—the total population average includes those who had no secondary eating or drinking.

For those who engaged in secondary eating while driving, working, preparing meals/meal cleanup, or grooming, the average BMI is about the same or lower as that of the total population, age 15 and over (27.1). However, for those who engaged in secondary eating while watching television, the average BMI is 27.6. For an individual who is 5'6", the difference of 0.5 BMI represents 3 pounds. This finding suggests that it is not just secondary eating but the accompanying activity that may be associated with higher BMIs.

Table 3

Top 10 activities that accompanied secondary eating/drinking, 2006-08, age 15+

ATUS activity code	Activity	Percent
120303	Television and movies (not religious)	16.8
050101	Work, main job	15.5
120101	Socializing and communicating with others	5.2
010201	Washing, dressing, and grooming oneself	5.0
020201	Food and drink preparation	4.4
180501	Travel related to working	3.5
180782	Travel related to shopping (except grocery shopping)	3.0
120312	Reading for personal interest	2.9
120301	Relaxing, thinking	2.5
020101	Household--interior cleaning	2.5

Table 4

**Time spent on secondary eating/drinking by selected accompanying activity
on an average day, 2006-08**

AGE 15+		Total	Men	Women
Total population				
Total time in primary eating	Minutes on an average day	67.2	69.0	65.4
Secondary eating	Minutes on an average day	23.7	23.2	24.3
Secondary drinking	Minutes on an average day	64.0	60.2	67.9
Body Mass Index	Average BMI	27.1	27.6	26.7
Engaged in secondary eating while driving				
Total time in primary eating	Minutes on an average day	54.2	55.0	53.5
Secondary eating	Minutes on an average day	130.7	136.0	125.5
Secondary drinking	Minutes on an average day	163.8	187.3	140.8
Body Mass Index	Average BMI	26.6	27.9	25.4
Engaged in secondary eating while performing paid work				
Total time in primary eating	Minutes on an average day	54.4	56.4	52.4
Secondary eating	Minutes on an average day	60.6	64.5	56.7
Secondary drinking	Minutes on an average day	139.5	143.5	135.6
Body Mass Index	Average BMI	27.0	27.7	26.3
Engaged in secondary eating while watching television				
Total time in primary eating	Minutes on an average day	59.6	60.5	58.6
Secondary eating	Minutes on an average day	68.7	68.6	68.8
Secondary drinking	Minutes on an average day	120.0	117.6	122.4
Body Mass Index	Average BMI	27.6	28.0	27.1
Engaged in secondary eating while preparing meals or during meal cleanup				
Total time in primary eating	Minutes on an average day	54.0	54.9	53.7
Secondary eating	Minutes on an average day	140.1	178.9	124.8
Secondary drinking	Minutes on an average day	147.5	156.3	144.0
Body Mass Index	Average BMI	26.7	27.2	26.6
Engaged in secondary eating while grooming				
Total time in primary eating	Minutes on an average day	57.2	56.0	58.0
Secondary eating	Minutes on an average day	215.4	246.9	195.4
Secondary drinking	Minutes on an average day	164.9	165.0	164.8
Body Mass Index	Average BMI	25.9	27.1	25.1

—continued

Table 4

**Time spent on secondary eating/drinking by selected accompanying activity
on an average day, 2006-08—continued**

AGE 18+ continued		Total	Men	Women
AGE 18+				
Total population				
Total time in primary eating	Minutes on an average day	68.1	69.9	66.3
Secondary eating	Minutes on an average day	24.1	23.5	24.8
Secondary drinking	Minutes on an average day	66.0	62.0	70.0
Body Mass Index	Average BMI	27.4	27.8	26.9
Engaged in secondary eating while driving				
Total time in primary eating	Minutes on an average day	54.4	55.0	53.8
Secondary eating	Minutes on an average day	131.1	134.2	127.9
Secondary drinking	Minutes on an average day	165.5	187.6	143.8
Body Mass Index	Average BMI	26.8	28.0	25.5
Engaged in secondary eating while performing paid work				
Total time in primary eating	Minutes on an average day	54.7	56.7	52.8
Secondary eating	Minutes on an average day	60.6	64.1	57.2
Secondary drinking	Minutes on an average day	140.4	143.8	137.0
Body Mass Index	Average BMI	27.0	27.8	26.3
Engaged in secondary eating while watching television				
Total time in primary eating	Minutes on an average day	60.2	61.0	59.4
Secondary eating	Minutes on an average day	70.2	69.2	71.2
Secondary drinking	Minutes on an average day	122.4	119.4	125.6
Body Mass Index	Average BMI	27.9	28.3	27.4
Engaged in secondary eating while preparing meals or during meal cleanup				
Total time in primary eating	Minutes on an average day	54.3	55.5	53.9
Secondary eating	Minutes on an average day	140.0	174.6	126.4
Secondary drinking	Minutes on an average day	149.7	159.7	145.8
Body Mass Index	Average BMI	26.8	27.3	26.6
Engaged in secondary eating while grooming				
Total time in primary eating	Minutes on an average day	58.2	56.5	59.3
Secondary eating	Minutes on an average day	235.6	262.5	218.2
Secondary drinking	Minutes on an average day	179.6	178.7	180.1
Body Mass Index	Average BMI	26.3	27.6	25.5

Note: A primary activity refers to an individual's main activity. Travel times not included.

Primary eating & drinking includes Eating and drinking (110101 and 110199), Eating and drinking not elsewhere classified (n.e.c.) (119999), and Eating and drinking as part of job (050202). Driving is 18xxxx (travel with TEWHERE=12). Paid work is 05xxxx. Watching television is 120303 and 120304. Preparing meals is 0202xx. Grooming is 0102xx. BMI = Body Mass Index.

Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Time Use Patterns, BMI, and General Health

Obesity is the most common food and nutrition-related health problem in America. The ATUS and EH Module data allow research on the types of activities and eating patterns that are associated with obesity and those that are associated with healthy weight, overall health, and well-being.

The Eating & Health Module asked ATUS respondents their height and weight, which allows the calculation of body mass index (BMI).¹⁸ BMI can then be analyzed in conjunction with time diary, demographic, and labor force information. Although self-reported, researchers have found that differences between self-reported BMI and measured BMI are small, and so are acceptable to use for analysis of nonelderly adults.¹⁹ In addition, the expected underreporting of BMI (through underreporting of weight and/or overreporting of height) in the EH Module data does not appear to be large.²⁰ So while the EH Module BMIs should not be used to obtain an official measure of obesity in the United States, the data are suitable for analyzing time use behavior as it relates to BMI.

Table 5 shows eating/drinking mean times among the BMI groups for Americans age 20 and over.²¹ Only 1.4 percent of the ATUS and EH Module survey respondents age 20 and over are underweight.²² Because this group is so small, the discussion in this section focuses on those who are normal weight, overweight, and obese. Those with normal weight have a mean duration of primary eating longer than that for the other groups. In addition, the time spent in secondary eating is longer as well. Although these differences in times spent appear small, these small amounts of time add up, and result in different eating patterns.

It may be that the eating pattern differences among the weight groups are not captured by absolute time spent, but by the relative time spent in primary and secondary eating/drinking. Underweight, normal-weight, and overweight persons had higher ratios of primary to secondary eating/drinking than those who were obese (fig. 15), which may indicate that obese individuals were doing more “mindless” eating/drinking (Wansink, 2004).

Some activities exhibit clear differences in the time spent across BMI groups (fig. 16). (Appendix table 5 presents the time spent on all major activities by BMI group and by employment status.) Those who are overweight spent the longest amount of time working of the BMI groups, at 233 minutes (3.9 hours) time spent in paid work on an average day. This total may seem low, but it is averaged over those employed (full- and part-time) and those not employed, and averaged over 7 days of the week, including holidays. The higher work time average for obese respondents may indicate that those who spend more time working have less time for activities that contribute to a healthy lifestyle.

The average time spent watching television rises from those who are normal weight (146.5 minutes or 2.4 hours) to those who are overweight (164 minutes or 2.7 hours) to those who are obese (184 minutes or 3.1 hours).²³ The difference in time spent watching TV between those of normal weight and those who are obese is 37 minutes a day.

¹⁸All height and weight values are self-reported. Height and weight are bottom- and top-coded for confidentiality. The EH Module includes a screening question for pregnancy as pregnant women were not asked their weight and so have missing BMIs. See Hamrick (2010), Eating and Health Module User's Guide for more information. See <http://www.ers.usda.gov/Data/ATUS/Documentation.htm> for discussion of nonresponse bias of missing Body Mass Index (BMI) values.

¹⁹Cawley and Burkhauser, 2006; Kuczmarski, Kuczmarski, and Najjar, 2001.

²⁰Pinkston and Steward, 2009.

²¹Body Mass Index for adults age 20 or over is calculated as: $\text{weight (LB)} / [\text{height (in)}]^2 \times 703$. BMI groups are underweight (BMI < 18.5), normal weight (18.5 ≤ BMI < 25), overweight (25 ≤ BMI < 30), and obese (30 ≤ BMI). For purposes of interpreting BMI, Centers for Disease Control and Prevention define adults as those age 20 and over. See CDC for more information on adult BMI: <http://www.cdc.gov/healthyweight/assessing/bmi/index.html>

²²Those who are underweight are younger, on average, than other persons, with an average age of 41 years versus 47 for those not underweight and over 20 years old. Twenty percent are age 20-24, versus 9 percent for the other BMI groups. Those who are underweight are less likely to be employed and more likely to have household income less than 185 percent of the poverty threshold.

²³See Wansink (2004) for a discussion of how watching television can prolong food consumption.

Table 5

Time spent in eating/drinking activities by BMI group (age 20+) on an average day over 2006-08

	Average minutes per day, population	Average minutes per day, men	Average minutes per day, women
BMI GROUPS			
Underweight			
Total time in primary eating & drinking	65.8	61.9	67.0
Secondary eating	20.7	20.6	20.8
Secondary drinking	76.2	87.4	72.9
Normal weight			
Total time in primary eating & drinking	71.0	73.7	69.3
Secondary eating	27.9	25.4	29.5
Secondary drinking	66.8	60.5	70.8
Overweight			
Total time in primary eating & drinking	68.8	70.3	66.6
Secondary eating	22.9	22.8	22.9
Secondary drinking	62.2	60.8	64.3
Obese			
Total time in primary eating & drinking	65.1	67.8	62.1
Secondary eating	20.6	22.2	18.8
Secondary drinking	70.4	67.0	74.2

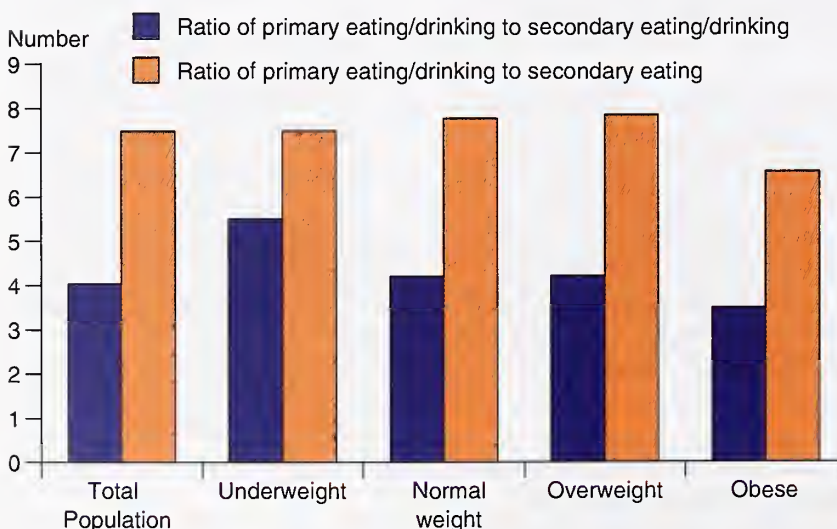
Note: A primary activity refers to an individual's main activity.

Primary eating & drinking includes Eating and drinking (110101 and 110199), Eating and drinking, not elsewhere classified (119999) and Eating and drinking as part of job (050202).

Underweight is BMI < 18.5, 18.5 ≤ BMI < 25.0 is Normal weight, 25.0 ≤ BMI < 30.0 is Overweight, 30.0 ≤ BMI is Obese. Pregnant women not included in weight and Body Mass Index estimates.

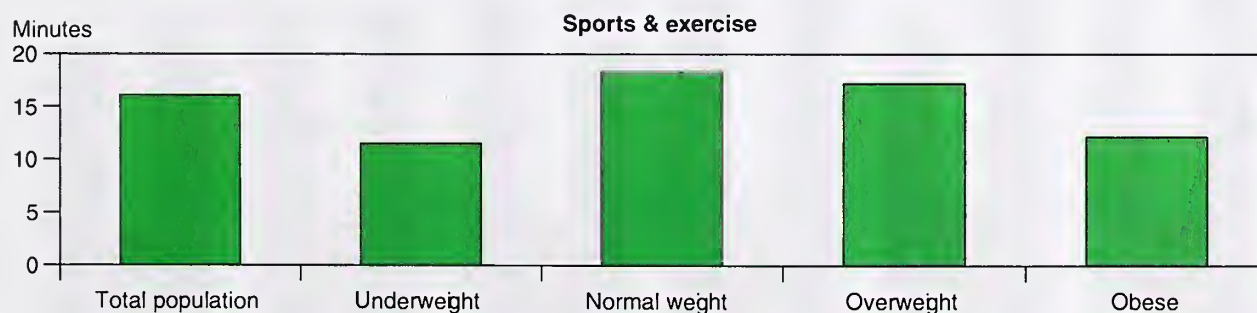
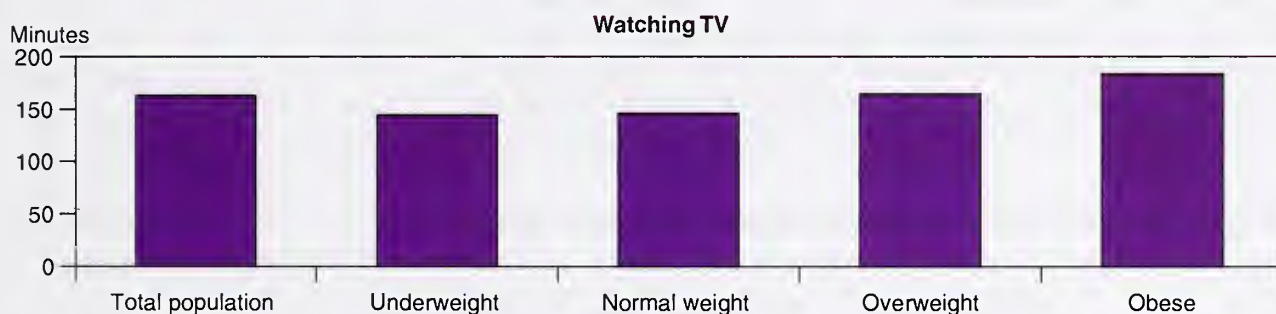
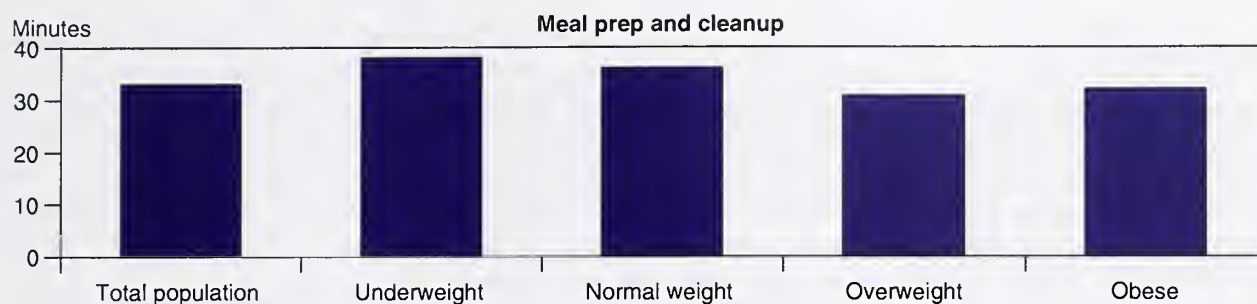
Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Figure 15

Ratio of time spent in primary and secondary eating and drinking on an average day over 2006-08, age 20+

Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Figure 16
Selected activities by BMI group



Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Finally, normal-weight respondents spent the longest average time engaged in sports and exercise, 18.3 minutes on an average day, while those who were obese averaged only 12.2 minutes.

General Health

The EH Module included a question on general health—*In general, would you say that your health is Excellent, Very Good, Good, Fair, or Poor?*

Self-rated health status is an inexpensive measure from a survey instrument standpoint that has been found to provide meaningful information on health and well-being. Self-reported general health status has been found to predict mortality and morbidity and is used in other Federal surveys to assess overall well-being.²⁴

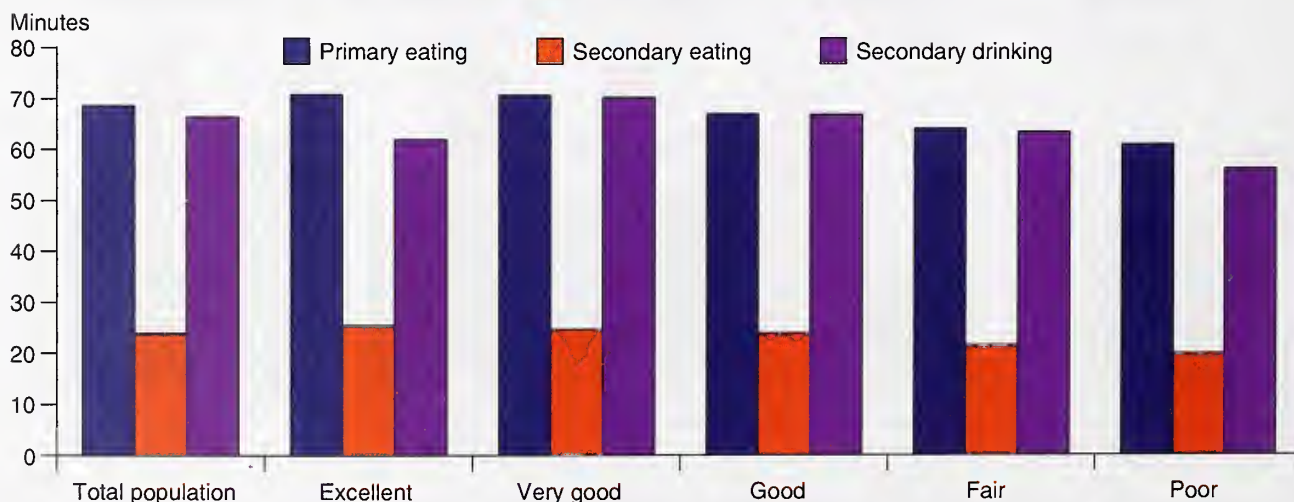
²⁴Hennessy et al., 1994.

Time spent in various activities by health status is as expected (appendix table 6). Those with poor health spend more time sleeping than others and less time in paid work. (Time spent sleeping is over a 24-hour period, not just overnight.) Those with good, fair, and poor health spent less time engaged in primary eating and drinking than those with excellent or very good health (fig. 17). With only this information, it is difficult to determine what the relationship is between primary eating and drinking time and health; further research is needed to identify the relationships underlying this association.

Eighty-three percent of those age 20 or over reported excellent, very good, or good health. The distribution of health status between men and women is essentially the same. Those with household income less than 185 percent of the poverty threshold had, on average, worse health status than those with higher incomes. Those participating in SNAP/FSP and those who were income-eligible non-participants reported worse health status and higher BMIs, on average, than nonparticipants with higher income. Metro and nonmetro residents had essentially the same health status distributions. However, nonmetro residents had higher BMIs than those in metro areas.

Figure 17

Time spent in eating/drinking activities by general health status, age 20+



Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Meal Preparation and Grocery Shopping

How Long Does It Take?

Retail market changes over the years have changed the patterns of how individuals shop. Better understanding of shopping patterns can inform research on the impact of food industry changes. On an average day over 2006-08, about 14 percent of Americans age 18 and over shopped for groceries (table 6).²⁵ Thus, grocery shopping is not an activity that people typically do every day. The average time spent in grocery shopping for those who shopped was 44 minutes.

Women were more likely to grocery shop than men and spent more time shopping than men as well. Those age 65 and over were the most likely of the age groups to shop on an average day. Those employed were less likely to shop on an average day, and employed individuals spent less time grocery shopping than those not employed.

²⁵We do not include travel time to grocery shopping in our analysis here. A 2009 USDA report to Congress (Ver Ploeg et al., 2009) presented findings of a study on "food deserts," areas that have limited access to affordable, nutritious food. Time spent in travel to and from grocery shopping was analyzed. Individuals in low-income areas with low supermarket access have longer travel times to the grocery store, go grocery shopping less frequently, and are more likely to use work as an "anchor" for grocery shopping than others.

Table 6
Time spent in grocery shopping on an average day over 2006-08

	Average grocery shopping time, total population (minutes)	Average percent engaged in grocery shopping (percent)	Average grocery shopping time, participants (minutes)
Total population	6.1	13.9	44.3
Gender			
Men	4.3	10.4	41.0
Women	7.9	17.1	46.2
Age group			
Age 18-24	4.1	8.3	49.1
Age 25-64	6.1	14.4	42.7
Age 65+	7.7	15.8	48.7
Employment			
Employed	5.4	13.0	41.7
Not employed	7.7	15.7	48.8
Income group			
Income >185% poverty threshold	6.1	14.4	42.5
Income < 185% poverty threshold	6.3	13.0	48.2
Income missing	5.9	11.3	51.9
SNAP/FSP participation			
SNAP/FSP participant household	7.2	13.3	53.9
Non-SNAP but income eligible	5.8	12.8	44.8
Non-SNAP, income>130% poverty threshold	6.2	14.2	43.2
Region			
Metro	6.3	14.1	44.5
Nonmetro	5.4	12.6	43.1

Grocery shopping is 070101.

Participants are those who engaged in grocery shopping on their diary day.

Travel times not included.

Sources: 2006-08 American Time Use Survey and Eating and Health Module data.

Those with higher household incomes were more likely to grocery shop on an average day than those with household incomes less than 185 percent of the poverty threshold. The different participation rates—14.4 percent for higher income individuals and 13.0 percent for lower income individuals—is equivalent to higher income individuals shopping once every 6.9 days and lower income individuals shopping once every 7.7 days, almost a 1-day difference in grocery shopping frequency. Individuals in SNAP/FSP households had about the same grocery shopping participation rates as other low-income respondents who were in households that did not receive SNAP/FSP benefits. SNAP/FSP participants spent the longest time grocery shopping among all groups, 54 minutes for those who grocery shopped. Metro residents were more likely to grocery shop on an average day than nonmetro residents, although time spent shopping was about the same.

On an average day, Americans age 18 and over spent 33 minutes in food preparation, including cleanup (table 7). Over half, 54 percent, of Americans engaged in food prep on an average day. Those who engaged in food prep spent just over an hour on this activity. Women spent more time in food prep

Table 7

Time spent in meal preparation and cleanup on an average day over 2006-08, total population (age 18+) and meal prep participants

	Average meal prep time, total population (minutes)	Average percent engaged in meal prep (percent)	Average meal prep time, participants (minutes)
Total population	33.0	53.6	61.5
Gender			
Men	18.3	39.2	46.8
Women	46.6	67.1	69.5
Age group			
Age 18-24	15.2	30.6	49.5
Age 25-64	34.0	55.8	61.0
Age 65+	41.6	61.0	68.1
Employment			
Employed	25.7	49.1	52.5
Not employed	47.9	63.0	76.1
Income group			
Income >185% poverty threshold	29.5	52.2	56.4
Income < 185% poverty threshold	40.3	57.0	70.8
Income missing	40.2	53.4	75.3
SNAP/FSP participation			
SNAP/FSP participant household	47.9	64.1	74.7
Non-SNAP but income eligible	39.9	54.8	72.8
Non-SNAP, income>130% poverty threshold	30.4	52.8	57.6
Region			
Metro	32.6	53.3	61.1
Nonmetro	34.7	54.9	63.3

Meal preparation is: Food and drink preparation (020201); Food presentation (020202); Kitchen and food cleanup (020203); Food & drink prep, presentation, and clean-up, not elsewhere classified (020299). SNAP = Supplemental Nutrition Assistance Program; FSP = Food Stamp Program. Participants are those who engaged in food prep and cleanup on their diary day.

Sources: 2006-08 American Time Use Survey and Eating and Health Module data.

than men, 47 minutes versus 18 minutes, and were more likely to engage in food prep on an average day, 67 percent versus 39 percent.

Those who were 65 and older spent the most time in food preparation (42 minutes), had the highest rate of food preparation (61 percent), and had the longest time spent by those who prepared food (68 minutes). This is consistent with the finding that those age 65 and over were more likely to grocery shop on an average day than those in other age groups, spent the longest amount of time in primary eating and drinking, and spent less time in secondary eating/drinking than other age groups. Clearly those age 65 and over are preparing and having meals, as opposed to just eating/drinking food.²⁶

Those employed spent less time and were less likely to engage in food prep on an average day than the total population average. Persons in households with higher incomes spent less time, but were equally likely to prepare food as those with lower incomes. Over two-thirds of individuals in SNAP/FSP households engaged in food prep on an average day, and those SNAP/FSP recipients who prepared food spent 75 minutes doing so. Nonmetro residents spent slightly more time, on average, than metro residents in food prep, 35 minutes versus 33 minutes.

Who Does It?

The EH Module included questions: *Are you the person who usually does the grocery shopping in your household? Are you the person who usually prepares the meals in your household?* Responses were—Yes, No, and Split Equally with other household member(s). Over 2006-08, 73 percent of women and 32 percent of men age 18 or over reported that they were the usual person to do the grocery shopping for their household (table 8). Eleven percent of women and 18 percent of men reported that grocery shopping is split equally in their household. Those age 25-64 and 65 and over had similar responses to the grocery shopping question. However, those age 18-24, for both men and women, were more likely to report that they were not the usual grocery shopper in the household.

Only a small number of individuals in single-person households reported that they were not the usual grocery shopper, 5 percent of men and 6 percent of women. Individuals in two-adult, no-children households had the highest percentage reporting that grocery shopping was split equally. As expected, in one-adult households with a child or children, the adult was the usual grocery shopper in almost all cases, 98 percent.

The distribution of responses for usual meal preparer was very similar to that of usual grocery shopper—73 percent of women and 30 percent of men reported that they were the usual meal preparer in the household. For those 65 and over, women were even more likely to be the usual meal preparer (82 percent) than the usual grocery shopper (73 percent).

²⁶The authors listened to many ATUS interviews as part of the process of fielding the EH Module. Rarely did a respondent under 65 years old refer to eating as a *meal*, or identify eating as being *breakfast*, *lunch*, or *dinner/supper*. Eating activities were reported by the food eaten, such as “I ate a sandwich.” Respondents who were over 65 were much more likely to identify meals as an activity and identify which meal, such as breakfast.

Table 8

Usual grocery shopper and usual meal preparer (age 18+) in household, 2006-08

	Total	Men	Women	Total	Men	Women
	Are you the person who usually does the grocery shopping?			Are you the person who usually prepares the meals?		
Percent						
Yes	53.3	32.3	72.9	52.3	29.7	73.4
No	32.0	49.3	15.7	34.1	54.3	15.3
Split equally	14.8	18.4	11.4	13.6	16.1	11.3
Age						
Age 18-24						
Yes	30.2	21.6	38.9	29.4	20.7	38.2
No	57.3	66.8	47.7	56.6	65.7	47.3
Split equally	12.5	11.7	13.4	14.0	13.6	14.4
Age 25-64						
Yes	56.2	33.3	78.4	54.4	31.1	77.0
No	28.5	47.1	10.4	31.0	51.4	11.2
Split equally	15.3	19.6	11.2	14.6	17.5	11.9
Age 65+						
Yes	57.6	36.6	73.4	59.9	30.0	82.3
No	28.4	45.4	15.6	31.2	58.9	10.4
Split equally	14.0	17.9	11.1	8.9	11.1	7.3
Household type						
Single-person (adult) household						
Yes	94.4	94.8	94.0	94.8	93.9	95.6
No	5.6	5.2	6.0	5.2	6.1	4.4
Split equally	NA	NA	NA	NA	NA	NA
Two adults, no children						
Yes	46.0	24.0	67.9	45.8	20.8	70.9
No	32.1	50.3	13.9	36.7	59.9	13.5
Split equally	22.0	25.7	18.2	17.5	19.3	15.6
One adult, child/children						
Yes	97.8	96.2	98.2	94.3	91.6	94.9
No	1.4	2.4	1.2	3.5	5.5	3.1
Split equally	0.8	1.4	0.7	2.2	2.9	2.0
Two adults, child/children						
Yes	49.5	18.3	79.4	48.1	16.7	78.2
No	33.5	58.7	9.4	34.6	60.9	9.5
Split equally	17.0	23.0	11.2	17.2	22.4	12.3

Notes: Data refer to persons 18 years or older.

For household type, other household types not presented.

Child/children refers to person under age 18.

Source: Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module.

Meals Obtained at School

The EH Module asked respondents from households with children or youths age 18 or younger if the children/youths in the household obtained meals prepared at school, day care, or a summer program in the previous week. This question was asked for breakfasts and lunches.

In FY2009, the National School Lunch Program provided meals to more than 31 million children each school day, at a cost of \$9.8 billion. The School Breakfast Program, which operated in over 101,000 public and nonprofit private schools and residential childcare institutions in FY2009, cost \$2.9 billion. Both programs require that school meals meet nutrition standards established by the Food and Nutrition Service of USDA. Children from families with incomes at or below 130 percent of the poverty threshold are eligible for free meals, and those with family incomes between 130 percent and 185 percent of the poverty threshold are eligible for reduced-price meals; others may receive USDA program meals but pay a price set by their local school district. Other USDA child nutrition programs include the Child Care Food Program, which provides nutritious meals and snacks to children in participating childcare/Head Start centers and family day care homes, and the Summer Food Service Program (\$357.9 million in FY2009), which provides meals to children living in low-income areas during the summer months when school is out. Besides these USDA-supported meal programs, schools, day care centers, and summer programs may provide meals and snacks to children for a fee or through other funding mechanisms.

The decision to obtain meals prepared at school, day care, or summer programs (hereafter called school/day care meals) may be based on either time or money factors. For low-income households, USDA-provided free or reduced-price meals may offer monetary benefits. For them, and for other households, they may also relieve time constraints. Information from the EH Module can be used to understand the time benefits of school/day care meals and to learn more about the types of households that value those benefits. For the adults in these households, school/day care meals may provide a time savings; for teenagers, obtaining school meals is an indicator of the teen's environment.

Over 2006-08, 54 percent of households with children reported that at least one child obtained either breakfast, lunch, or both meals from school, day care, or a summer program. In these households, adult respondents who were the household's usual meal preparers spent more time in paid work, 223 minutes (3.7 hours), and less time in child care, 80 minutes, than did respondents from other households with children (table 9 and appendix tables 8, 9a, and 9b).²⁷ This indicates that working parents "outsource" their children's meals, buying prepared meals for their children at school or day care. Doing so can save households time otherwise spent preparing and packing meals at home, and this may be especially valuable to households with principal meal preparers employed in paid work. However, adults in households with children who obtain meals at school actually spent slightly longer on an average day in meal preparation and cleanup, 54 minutes versus 52.5 minutes for those in households with children who did not obtain meals at school. It could be that those whose children obtained meals at school would have engaged in meal prep/clean up for an even longer duration without school/

²⁷For an overview of working parents' time use patterns, see Allard and Janes, 2008.

Table 9

Average time spent in various activities by usual meal preparers (age 19+) on an average day, 2006-08, by employment status and school meal obtainment

	Household members obtained meals at school			Household members did not obtain meals at school		
	Total	Employed	Not employed	Total	Employed	Not employed
	<i>Minutes</i>					
Food prep/cleanup	54.1	43.8	82.0	52.5	43.5	71.8
Housework	138.1	113.3	205.2	138.8	117.9	183.8
Childcare	80.3	68.3	112.5	92.3	72.2	135.6
Paid work	222.7	301.8	8.4	193.4	280.2	6.4
Sleep	504.6	494.1	533.1	508.9	495.3	538.3

Source: Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module.

day care meals. Further research is needed to analyze the factors influences these two groups' time use patterns.

Usual meal preparers in households with incomes above 185 percent of the poverty threshold and with children who obtain meals at school/day care spent more time in paid work than those in households in which children did not receive school/day care meals (fig. 18). Since these higher income households do not have the monetary incentive of free- or reduced-price school/day care meals, the value of the time-saving benefit is clear.

Teenagers age 15-18 who obtained school meals spent more time engaged in education activities and less time in paid work than those who did not obtain school meals (fig. 19 and appendix table 10).²⁸ They also had less "screen-time"—total time spent on a computer (excluding school-related computer use) and watching television.^{29, 30} Most of the difference in screentime was in time spent watching television—those who obtained school meals spent 116 minutes on an average day watching TV, and those who did not spent 142 minutes watching TV. Those who did not obtain meals at school spent 77 fewer minutes a day engaged in education activities and 29 minutes more engaged in screentime on an average day (equivalent to 178 hours a year) than those who did obtain meals at school on an average day.

Looking at those age 15 and 16 versus those age 17 and 18 (not shown in chart), the older teens spent more time in paid work and less time in education activities than the younger teens, as expected since older high school students have more freedom and may have reduced class loads. However, this was true for both those who obtained meals at school and those who did not. Screentime for the older teens was about the same as for the younger teens.

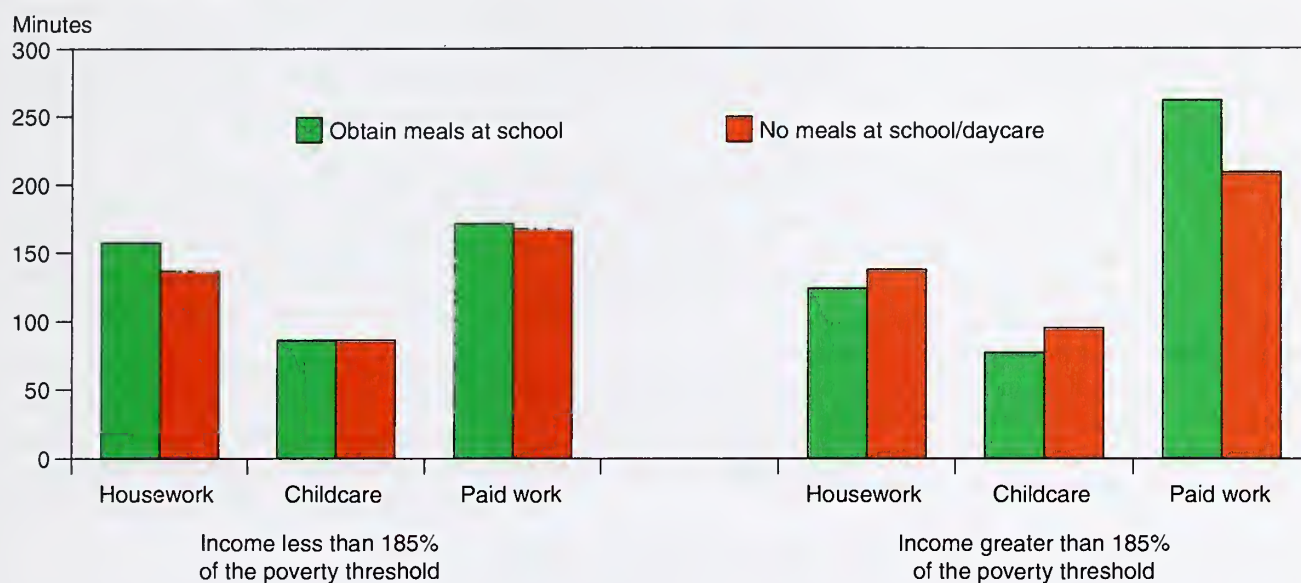
The average BMI of teenagers age 15-18 who obtained meals at school was 23.7, which is about the same as that of teenagers who do not obtain meals at school, 23.3.

²⁸For an overview of high school students' time use patterns, see Allard, 2008.

²⁹We defined screentime as the activities: household and personal email and messages (020904); television and movies, not religious (120303); television, religious (120304); playing games (120307); computer use for leisure, except games (120308); and computer use for volunteer activities (150101). Playing games includes both computer games and card, board, or pencil puzzle games, so this activity may overstate computer screentime. We cannot perfectly capture all computer use, as mode of delivery was not asked for some activities. For example, reading for personal interest (120312) could be on a variety of media.

³⁰Kalenkoski and Pabilonia (2009) found that an increase in paid work reduced time teens spent on screentime. Their finding appears in conflict with our finding. However, they did not consider whether or not the teens obtained meals at school.

Figure 18
Time spent in selected activities, individuals in households with children/youth on an average day 2006-08, usual meal preparers only



Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Figure 19
Time spent in selected activities, teenagers age 15-18 and in school, on an average day 2006-08



Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Implications for Future Research

This report presents an overview of the time Americans spent in eating and drinking beverages on an average day over 2006-08 and the characteristics and context of eating/drinking occurrences, including eating patterns by BMI group and meal preparation/grocery shopping patterns.

Among our findings was that certain eating patterns and activities, as reported in the Eating and Health Module over 2006-08, were associated with BMI group. Those who were normal weight spend more time, on average, in meal preparation and meal cleanup and also in sports and exercise than those who were overweight or obese. Those who were overweight or obese spent more time watching television than those who were normal weight, and those who were overweight spent the longest time, on an average day, in paid work. These findings indicate that the tradeoffs individuals face in determining how to spend their time have longrun implications—how individuals fit meal preparation and exercise around a work schedule could determine whether or not they become or remain overweight.

We also found that those who were employed were less likely to shop for groceries on an average day, spent less time in grocery shopping, were less likely to prepare meals, and spent less time in meal prep/cleanup than those not employed. For those employed individuals in households with children, the children were more likely to obtain meals at school. These findings indicate that individuals' time constraints factor into their decisions on time spent in food-related activities.

These findings are useful in thinking about how Americans fit eating into their lives and provide better understanding of behaviors associated with obesity. However, the statistics presented here are initial research findings on these data, and more research can be done to investigate the relationships between time use and well-being.

Future research using the American Time Use Survey and the Eating & Health Module data could improve programs and policies targeted at reducing obesity and improving overall nutrition. For example, Americans age 65 and over spend more time in primary eating and less time in secondary eating/drinking than other age groups. Is this due to their schedules, as many in this age group are retired, or is it a generational perception of eating as meal-based and not an incidental activity? What explains the regional differences in eating behavior and exercise participation—weather, availability of public transportation, access to supermarkets, time spent commuting, or other factors?

Low-income Americans have different eating patterns than those with higher incomes. Specifically, those with lower incomes spent less time in primary eating and drinking. Further investigation is needed to see why this is so and if it is cause for concern.

Those who are employed have different eating patterns than those who are not, and workers on different shifts have different eating patterns. In addition, adults who are overweight have the longest average time in paid work on an average day of the BMI groups. How does employment, occupation, and work shift affect eating/exercise patterns and BMI? Understanding these relationships would help to understand the time pressures that some individuals face in fitting meal preparation and exercise into their schedules.

Analysis of teenagers found that those who do not obtain meals at school engaged in considerably more screentime (non-school computer time and watching television) than those who do obtain meals at school. Understanding the relationships and factors that create this association could help inform programs concerned with childhood obesity.

ERS is currently engaged in furthering research on time use patterns. Specific projects include analysis of low-income individuals' eating patterns; measuring travel to grocery shopping in minutes; analysis of teenagers' time use patterns; research on work shifts and eating and exercise behavior; and BMI analysis of those who walk or cycle to work.

References

- Allard, Mary Dorinda. 2008. "How high school students use their time: a visual essay," *Monthly Labor Review*, Bureau of Labor Statistics, November, pp. 51-61. <http://stats.bls.gov/opub/mlr/2008/11/art4full.pdf>.
- Allard, Mary Dorinda, and Marianne Janes. 2008. "Time use of working parents: a visual essay," *Monthly Labor Review*, Bureau of Labor Statistics, June, pp. 3-14. <http://stats.bls.gov/opub/mlr/2008/06/art1full.pdf>.
- Andrews, Margaret, and Karen Hamrick (2009). "Shopping For, Preparing, and Eating Food: Where Does the Time Go?" *Amber Waves*, 7(4): 4. <http://www.ers.usda.gov/AmberWaves/December09/>.
- Cawley, John, and Richard V. Burkhauser. 2006 "Beyond BMI: The Value of More Accurate Measures of Fatness and Obesity in Social Science Research," National Bureau of Economic Research Working Paper 12291. <http://www.nber.org/papers/w12291>.
- French, S.A., M. Story, and R.W. Jeffery. (2001). "Environmental Influences on Eating and Physical Activity," *Annual Review of Public Health*, 22: 309-335.
- Gershuny, Jonathan, Deborah Lader, and Sandra Short. 2006. *The Time Use Survey, 2005: How we spend our time*. United Kingdom Office for National Statistics report. <http://www.statistics.gov.uk/cci/article.asp?ID=1600>.
- Guthrie, J.F., B. Lin, and Elizabeth Frazão. (2002). "Role of Food Prepared Away from Home in the American Diet, 1977-78 versus 1994-96: Changes and Consequences," *Journal of Nutrition Education and Behavior*, 34(3): 140-150.
- Guthrie, Joanne F., and Ket McClelland (2009). "Working Parents Outsource Children's Meals." *Amber Waves*: 5, <http://www.ers.usda.gov/AmberWaves/March09/Findings/OutsourceMeals.htm>.
- Hamermesh, Daniel S. 2010. "Incentives, time use and BMI: The roles of eating, grazing, and goods," *Economics and Human Biology*, 8(1): 2-15.
- Hamrick, Karen. 2010. *Eating and Health Module User's Guide*, Administrative Publication No. AP-047, USDA, Economic Research Service. <http://ers.usda.gov/Publications/AP/AP047/>.
- Hamrick, Karen, David Hopkins, and Ket McClelland. (2008). "How Much Time Do Americans Spend Eating?" *Amber Waves* 6(3): 36-37. <http://www.ers.usda.gov/AmberWaves/June08/DataFeature/>.
- Hennessy, C.H., D.G. Moriarty, M.M. Zack, P.A. Scherr, and R. Brackbill. 1994. "Measuring health-related quality of life for public health surveillance," *Public Health Reports*, 109(5): 665-672. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1403555/>.

- Howarth, N.C., T.T.K. Huang, S.B. Roberts, B-H. Lin, and M.A. McCrory. (2006). "Eating patterns and dietary composition in relation to BMI in younger and older adults." *International Journal of Obesity*, 31, 675-684.
- Kalenkoski, Charlene Marie, and Sabrina Wulff Pabilonia. 2009. "Time to Work or Time to Play: The Effect of Student Employment on Homework, Housework, Screen Time, and Sleep," Bureau of Labor Statistics Working Paper 423, March. <http://stats.bls.gov/osmr/abstract/ec/ec090010.htm>.
- Kuczmarski, M.F., R.J. Kuczmarski, and M. Najjar. 2001. "Effects of Age on Validity of Self-Reported Height, Weight, and Body Mass Index: Findings from the Third National Health and Nutrition Examination Survey, 1988-1994," *Journal of The American Dietetic Association*, 101(1): pp. 28-34.
- Ma, Y., E.R. Bertone, E.J. Stanek III, G.W. Reed, J.R. Hebert, N.L. Cohen, P.A. Merriam, I.S. Ockene (2003). "Association between Eating Patterns and Obesity in a Free-living US Adult Population," *American Journal of Epidemiology* 158(1): 85-92.
- Mertz, W., J.C. Tsui, J.T. Judd, S. Reiser, J. Hallfrisch, E.R. Morris, Priscilla D. Steele, and E. Lashley. (1991). "What are people really eating? The relation between energy intake derived from estimated diet records and intake determined to maintain body weight." *American Society for Clinical Nutrition*, 54: 291-295.
- Pinkston, Josh, and Jay Stewart. 2009. "How Does Time Use Affect the Probability of Becoming Obese?" Paper presented at the American Time Use Research Conference, College Park, MD, June 22-24. <http://www.popcenter.umd.edu/research/sponsored-events/atus-conf-workshop-2009>.
- Polivka, Anne. 2008. "Day, Evening, and Night Workers: A Comparison of What They Do in Their Nonwork Hours and with Whom They Interact," in *How Do We Spend Our Time? Evidence from the American Time Use Survey*, Jean Kimmel, ed., W.E. Upjohn Institute for Employment Research, Kalamazoo, MI.
- Reifschneider, Marianne J., Karen S. Hamrick, and Jill N. Lacey. (2011). "Exercise, Eating Patterns, and Obesity: Evidence from the ATUS and Its Eating & Health Module." *Social Indicators Research* 101(2): 215-219. <http://dx.doi.org/10.1007/s11205-010-9655-y>.
- U.S. Department of Labor, Bureau of Labor Statistics (2010). *American Time Use Survey User's Guide: Understanding ATUS 2003 to 2009*, July. <http://stats.bls.gov/tus/atususersguide.pdf>.
- Vernon, Margaret K. 2005. "Pre-testing Sensitive Questions: Perceived Sensitivity, Comprehension, and Order Effects of Questions about Income and Weight, Bureau of Labor Statistics Working Paper, August. <http://stats.bls.gov/ore/pdf/st050090.pdf>.
- Ver Ploeg, M., V. Breneman, T. Farrigan, K. Hamrick, D. Hopkins, P. Kaufman, B-H. Lin, M. Nord, T. Smith, and R. Williams (2009). *Access*

to Affordable and Nutritious Food—Measuring and Understanding Food Deserts and Their Consequences: Report to Congress. Administrative Publication AP-036. U.S. Department of Agriculture Economic Research Service. <http://www.ers.usda.gov/Publications/AP/AP036/>.

Wansink, B. (2004). "Environmental Factors That Increase the Food Intake and Consumption Volume of Unknowing Consumers," *Annual Review of Nutrition* 24(1): 455-479.

Websites

American Time Use Survey: <http://www.stats.bls.gov/tus/>

Eating & Health Module: <http://www.ers.usda.gov/Data/ATUS/>

Metabolic Equivalent values for Activities in the American Time Use Survey: <http://www.riskfactor.cancer.gov/tools/atus-met/>

USDA Food and Nutrition Service: <http://www.fns.usda.gov/fns/>

Centers for Disease Control U.S. Obesity Trends:
<http://www.cdc.gov/obesity/data/trends.html>

Appendix table 1a

**Time spent in eating and drinking activities on an average day over 2006-08,
with cell sizes and confidence intervals**

	Average minutes per day, civilian population				Minutes							
	<i>Total population</i>				Men				Women			
	Cell size	Total	90% CI min	90% CI max	Cell size	Men	90% CI min	90% CI max	Cell size	Women	90% CI min	90% CI max
Age 15 and older												
Total time in primary eating and drinking	37,832	66.9	66.39	67.37	16,427	68.6	67.90	69.38	21,405	65.2	64.50	65.95
Total time in associated activities	37,832	7.4	6.94	7.54	16,427	7.9	7.43	8.43	21,405	6.9	6.53	7.27
Secondary eating	37,832	23.5	22.34	24.61	16,427	22.8	20.86	24.70	21,405	24.1	22.77	25.49
Secondary drinking	37,832	63.1	61.10	65.12	16,427	59.1	56.19	61.95	21,405	66.9	63.99	69.83
Range of total secondary eating plus drinking												
Secondary eating and drinking (minimum)	37,832	76.8	74.69	78.93	16,427	72.6	69.45	75.82	21,405	80.7	77.91	83.56
Secondary eating and drinking (maximum)	37,832	78.6	76.45	80.68	16,427	74.4	71.15	77.57	21,405	82.5	79.71	85.33
Total secondary eating and drinking (adjusted for overlap)—one-half minimum+maximum	37,832	77.7	75.57	79.80	16,427	73.5	70.30	76.69	21,405	81.6	78.81	84.45
Total time in all eating and drinking activities		152.0				150.1				153.8		
Age 18 and older												
Total time in primary eating and drinking	35,837	67.8	67.25	68.28	15,416	69.6	68.83	70.43	20,421	66.0	65.27	66.76
Total time in associated activities	35,837	7.4	7.11	7.73	15,416	8.0	7.46	8.52	20,421	6.9	6.52	7.26
Secondary eating	35,837	23.9	22.71	25.09	15,416	23.1	21.14	25.13	20,421	24.6	23.17	26.07
Secondary drinking	35,837	65.1	62.99	67.20	15,416	61.0	58.02	63.94	20,421	68.9	65.87	72.01
Range of total secondary eating plus drinking												
Secondary eating and drinking (minimum)	35,837	78.8	76.61	81.03	15,416	74.5	71.24	77.73	20,421	82.9	79.89	85.84
Secondary eating and drinking (maximum)	35,837	80.6	78.39	82.80	15,416	76.2	72.96	79.50	20,421	84.7	81.70	87.63
Total secondary eating and drinking (adjusted for overlap)—one-half minimum+maximum	35,837	79.7	77.50	81.91	15,416	75.4	72.10	78.62	20,421	83.8	80.79	86.73
Total time in all eating and drinking activities		154.9				153.0				156.7		

Note: A primary activity refers to an individual's main activity.

Primary eating & drinking includes Eating and drinking (110101 and 110199), Eating and drinking not elsewhere classified (119999), and Eating and drinking as part of job (050202). Travel times not included except in associated activities. Associated activities are Waiting associated with eating & drinking (110281 and 110289) and Travel related to eating & drinking (191101 and 181199). Total secondary eating and secondary drinking time (adjusted for overlap) is one-half the sum of the total time assuming all overlap—secondary eating and secondary drinking occur at the same time—plus the total time assuming no overlap. Secondary Eating & Drinking minimum assumes all overlap of secondary eating & drinking if both occur during a primary activity. Secondary Eating & Drinking maximum assumes no overlap of secondary eating & drinking if both occur during a primary activity.

Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Appendix table 1b

Population engaged in eating and drinking activities and time spent on an average day over 2006-08, with cell sizes and confidence intervals (CI)

	Average share engaged in activity per day (percent)			Average minutes per day, for persons who engaged in the activity (minutes)											
				Total population				Men				Women			
	Total	Men	Women	Cell size	Total	90% CI min	90% CI max	Cell size	Men	90% CI min	90% CI max	Cell size	Women	90% CI min	90% CI max
Age 15 and older															
Total time in primary eating and drinking	95.9	96.2	95.6	36,275	69.7	69.28	70.21	15,763	71.4	70.62	72.14	20,512	68.2	67.51	68.89
Total time in associated activities	25.6	27.3	24.1	9,940	28.9	27.88	29.88	4,666	29.1	27.49	30.66	5,274	28.7	27.48	29.86
Secondary eating	52.5	48.4	56.3	20,008	44.7	42.63	46.86	8,131	47.0	43.25	50.84	11,877	42.9	40.46	45.32
Secondary drinking	35.4	33.0	37.5	13,591	178.5	173.46	183.55	5,569	178.8	171.19	186.36	8,022	178.3	171.39	185.18
Range of total secondary eating plus drinking															
Secondary eating and drinking (minimum)	53.9	49.9	57.7	20,547	142.5	138.85	146.11	8,352	145.6	139.55	151.56	12,195	140.0	135.30	144.66
Secondary eating and drinking (maximum)	53.9	49.9	57.7	20,547	145.7	142.12	149.34	8,352	149.0	142.97	155.03	12,195	143.1	138.42	147.73
Total secondary eating and drinking (adjusted for overlap)—one-half min+max	53.9	49.9	57.7	20,547	144.1	140.49	147.73	8,352	147.3	141.26	153.29	12,195	141.5	136.86	146.20
Total time in all eating and drinking activities					242.7				247.7				238.4		
Age 18 and older															
Total time in primary eating and drinking	96.0	96.2	95.8	34,380	70.6	70.13	71.10	14,793	72.4	71.61	73.24	19,587	68.9	68.21	69.63
Total time in associated activities	25.7	27.5	24.0	9,403	28.9	27.89	29.88	4,400	29.1	27.46	30.75	5,003	28.7	27.51	29.80
Secondary eating	52.1	48.2	55.7	18,808	45.9	43.65	48.09	7,576	48.0	44.03	51.88	11,232	44.2	41.56	46.80
Secondary drinking	35.5	33.1	37.7	12,886	183.5	178.24	188.81	5,225	184.1	176.37	191.75	7,661	183.1	175.90	190.28
Range of total secondary eating plus drinking															
Secondary eating and drinking (minimum)	53.6	49.7	57.2	19,326	147.1	143.30	150.92	7,784	149.9	143.84	155.90	11,542	144.9	139.92	149.82
Secondary eating and drinking (maximum)	53.6	49.7	57.2	19,326	150.4	146.64	154.21	7,784	153.4	147.33	159.44	11,542	148.0	143.11	152.94
Total secondary eating and drinking (adjusted for overlap)—one-half min+max	53.6	49.7	57.2	19,326	148.8	144.97	152.56	7,784	151.6	145.59	157.67	11,542	146.5	141.52	151.38
Total time in all eating and drinking activities					248.3				253.2				244.0		

Note: A primary activity refers to an individual's main activity.

Primary eating & drinking includes Eating and drinking (110101 and 110199), Eating and drinking not elsewhere classified (119999) and Eating and drinking as part of job (050202). Travel times not included except in associated activities. Associated activities are Waiting associated with eating & drinking (110281 and 110289) and Travel related to eating & drinking (181101 and 181199). Total secondary eating and secondary drinking time (adjusted for overlap) is one-half the sum of the total time assuming all overlap—secondary eating and secondary drinking occur at the same time—plus the total time assuming no overlap. Secondary Eating & Drinking minimum assumes all overlap of secondary eating & drinking if both occur during a primary activity. Secondary Eating & Drinking maximum assumes no overlap of secondary eating & drinking if both occur during a primary activity.

Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Appendix table 2

Time spent in eating and drinking activities and percent of civilian population engaged in each activity, on an average day over 2006-08 (minutes)

By age groups	Average minutes per day, population	Average percent engaged in activity	Average minutes per day for persons engaged in each activity
All			
Total time in primary eating and drinking	66.9	95.9	69.7
Secondary eating	23.5	52.5	44.7
Secondary drinking	63.1	35.4	178.5
Age groups			
Age 15-17			
Total time in primary eating and drinking	53.4	94.9	56.2
Secondary eating	16.9	57.9	29.2
Secondary drinking	32.6	33.6	97.0
Age 18-24			
Total time in primary eating and drinking	60.1	94.3	63.7
Secondary eating	27.4	56.0	48.9
Secondary drinking	56.6	34.4	164.4
Age 25-64			
Total time in primary eating and drinking	65.9	95.7	68.9
Secondary eating	24.6	53.7	45.8
Secondary drinking	72.5	37.7	192.3
Age 65+			
Total time in primary eating and drinking	81.5	98.4	82.8
Secondary eating	18.2	42.2	43.0
Secondary drinking	39.1	26.4	147.9

Note: A primary activity refers to an individual's main activity.

Primary eating & drinking includes Eating and drinking (110101 and 110199), eating and drinking not elsewhere classified (119999) and eating and drinking as part of job (050202).

Travel times not included.

Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Appendix table 3

Time spent in eating and drinking activities and percent of civilian population engaged in each activity, on an average day over 2006-08 (minutes)

By various subgroups	Age 15 and over			Age 18 and over		
	Average minutes per day, population	Average percent engaged in activity	Ave. minutes per day for persons engaged in each activity	Average minutes per day, population	Average percent engaged in activity	Ave. minutes per day for persons engaged in each activity
Region						
<i>Metro</i>						
Total time in primary eating and drinking	67.1	95.9	70.0	68.0	96.0	70.8
Secondary eating	23.8	53.3	44.7	24.3	53.0	45.8
Secondary drinking	60.9	35.6	171.1	63.0	35.7	176.3
<i>Nonmetro</i>						
Total time in primary eating and drinking	65.9	95.8	68.8	66.8	95.9	69.7
Secondary eating	21.9	48.7	45.0	22.2	48.3	46.0
Secondary drinking	73.1	34.2	213.4	74.6	34.3	217.4
<i>Northeast</i>						
Total time in primary eating and drinking	70.6	96.3	73.4	71.9	96.4	74.5
Secondary eating	21.0	52.8	39.8	21.2	52.2	40.6
Secondary drinking	53.3	35.2	151.1	53.6	35.1	152.7
<i>Midwest</i>						
Total time in primary eating and drinking	65.9	95.8	68.8	66.8	95.9	69.6
Secondary eating	26.4	55.6	47.4	26.9	55.3	48.6
Secondary drinking	80.4	38.3	209.8	83.2	38.4	216.5
<i>South</i>						
Total time in primary eating and drinking	64.7	95.4	67.8	65.5	95.5	68.6
Secondary eating	21.2	50.1	42.3	21.6	49.8	43.4
Secondary drinking	61.5	33.8	181.8	63.5	34.1	186.4
<i>West</i>						
Total time in primary eating and drinking	68.5	96.5	71.0	69.3	96.4	71.8
Secondary eating	26.1	52.6	49.6	26.6	52.3	51.0
Secondary drinking	54.6	34.6	157.6	56.8	34.8	163.4
Constant grazers (4.5+ hours eating/drinking)						
Total time in primary eating and drinking	75.1	93.1	80.6	75.4	93.1	81.0
Secondary eating	133.0	93.0	143.0	133.9	92.8	144.3
Secondary drinking	483.4	90.0	537.0	484.3	90.0	538.1
No primary eating/drinking						
Total time in primary eating and drinking	0.0	0.0	0.0	0.0	0.0	0.0
Secondary eating	50.7	81.7	62.1	52.1	81.9	63.6
Secondary drinking	137.6	62.3	220.8	142.9	62.8	227.5
Reported "All Day" secondary eating and/or "All Day" secondary drinking (Oct. 2006-Dec. 2008)						
Total time in primary eating and drinking	57.1	92.9	61.4	57.3	93.0	61.6
Secondary eating	222.2	95.8	232.0	224.8	95.7	234.9
Secondary drinking	791.0	94.6	836.2	792.9	94.6	838.3

—continued

Appendix table 3

Time spent in eating and drinking activities and percent of civilian population engaged in each activity, on an average day over 2006-08 (minutes)—continued

By various subgroups	Age 15 and over			Age 18 and over		
	Average minutes per day, population	Average percent engaged in activity	Ave. minutes per day for persons engaged in each activity	Average minutes per day, population	Average percent engaged in activity	Ave. minutes per day for persons engaged in each activity
Employment status						
<i>Employed</i>						
Total time in primary eating and drinking	65.6	95.5	68.7	66.0	95.6	69.1
Secondary eating	24.4	54.9	44.4	24.5	54.7	44.8
Secondary drinking	70.9	38.0	186.3	71.9	38.2	188.3
<i>Not employed</i>						
Total time in primary eating and drinking	69.3	96.6	71.7	71.4	96.7	73.8
Secondary eating	21.8	47.8	45.6	22.6	46.7	48.4
Secondary drinking	48.5	30.3	160.1	51.1	29.9	170.8
Income groups						
<i>Income >185% poverty threshold</i>						
Total time in primary eating and drinking	69.6	96.3	72.3	70.4	96.3	73.1
Secondary eating	24.6	56.9	43.3	25.0	56.5	44.2
Secondary drinking	68.8	39.1	175.8	71.0	39.3	180.5
<i>Income < 185% poverty threshold</i>						
Total time in primary eating and drinking	61.2	95.2	64.3	61.5	95.2	64.6
Secondary eating	21.0	44.0	47.6	21.1	43.7	48.2
Secondary drinking	53.5	28.3	188.9	54.0	28.2	191.7
<i>Income missing</i>						
Total time in primary eating and drinking	61.1	94.4	64.7	66.3	95.4	69.4
Secondary eating	21.8	39.3	55.5	25.3	35.8	70.7
Secondary drinking	39.6	23.1	171.4	42.8	21.1	202.8
SNAP/FSP participation						
<i>SNAP/FSP participant household</i>						
Total time in primary eating and drinking	53.5	92.6	57.8	54.4	92.8	58.6
Secondary eating	26.1	47.4	55.0	27.2	46.9	58.0
Secondary drinking	68.6	32.8	209.0	68.9	32.7	210.3
<i>Non-SNAP/FSP but income eligible</i>						
Total time in primary eating and drinking	60.6	95.7	63.4	60.9	95.7	63.7
Secondary eating	19.2	41.5	46.3	18.9	41.0	46.1
Secondary drinking	42.1	25.4	165.9	42.1	25.1	167.4
<i>Non-SNAP/FSP, income>130% poverty threshold</i>						
Total time in primary eating and drinking	69.4	96.4	72.1	70.1	96.4	72.8
Secondary eating	24.2	55.7	43.4	24.5	55.4	44.2
Secondary drinking	67.8	38.1	177.8	69.8	38.3	182.4

Note: A primary activity refers to an individual's main activity. SNAP = Supplemental Nutrition Assistance Program; FSP = Food Stamp Program. Primary eating & drinking includes Eating and drinking (110101 and 110199), Eating and drinking not elsewhere classified (119999) and Eating and drinking as part of job (050202). Data refer to persons 15 years or older or 18 years or older. Metro areas are defined as GTMETSTA=1 and nonmetro areas are defined as GTMETSTA=2 and GTMETSTA=3. Constant grazers are defined as persons who have a total of 4.5 hours of eating/drinking among primary and secondary eating and drinking.

Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Appendix table 4

Time spent in eating and drinking activities on an average day over 2006-08, by work shift and gender

	Average minutes per day, civilian population		
	Total	Men	Women
Age 18 and older			
Day shift			
Primary eating and drinking	63.6	66.5	60.0
Secondary eating	24.0	20.8	28.1
Secondary drinking	73.1	62.7	86.2
Evening shift			
Primary eating and drinking	50.4	52.3	48.3
Secondary eating	25.4	35.1	15.0
Secondary drinking	72.3	62.6	82.6
Night shift			
Primary eating and drinking	49.6	51.9	46.3
Secondary eating	24.4	15.7	37.0
Secondary drinking	74.6	64.8	88.7

Note: A primary activity refers to an individual's main activity.

Data refer to persons 18 years or older who engaged in paid work, unpaid work for a family business, or job search at least 60 minutes on their diary day.

Primary eating & drinking includes Eating and drinking (110101 and 110199), Eating and drinking not elsewhere classified (119999) and Eating and drinking as part of job (050202).

Day shift workers are those who performed at least half of their paid work time between 8 am and 4 pm; evening shift workers are those who performed at least half of their paid work time between 4 pm and 12 am (midnight); and night shift workers are those who performed at least half of their paid work time between 4 am and 8 am and/or 12 am (midnight) and 4 am.

Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Appendix table 5

Time spent in various activities, on an average day over 2006-08 (minutes) by BMI group and employment status, age 20 and over, total population and by employment status

	Total population	Underweight	Normal weight	Overweight	Obese
Total population					
Sleep	509.1	535.3	510.5	505.4	510.9
Grooming	39.4	43.4	41.5	38.3	38.1
Other personal care	5.9	2.7	5.2	6.2	6.5
Meal preparation/cleanup	33.0	38.0	36.1	30.7	32.0
Other household activities	78.9	76.7	83.3	79.0	73.4
Caring for household members	28.1	32.1	32.6	24.7	26.9
Caring for non-household members	9.2	9.7	8.4	9.8	9.3
Paid work	222.6	176.8	214.3	233.0	221.7
Education	11.0	32.8	15.1	8.5	8.0
Grocery shopping	6.2	7.9	6.7	5.5	6.4
Other purchases	24.1	28.8	24.5	24.1	23.4
Government and civic activities	0.5	0.6	0.4	0.4	0.7
Primary eating and drinking	68.5	65.8	71.0	68.8	65.1
Activities associated with eating	0.2	0.4	0.2	0.1	0.1
Watching TV	163.1	144.4	146.5	164.1	183.7
Using PC	21.0	15.7	20.2	19.7	24.1
Other socializing and leisure	94.1	105.5	94.0	94.6	92.9
Sports and exercise	16.1	11.6	18.3	17.2	12.2
Watching sports	1.8	0.3	1.6	2.3	1.5
Other sports activities	0.0	0.0	0.0	0.0	0.1
Religious and volunteer activities	16.5	14.1	16.7	16.5	16.3
Phone calls and emails	6.3	7.2	7.0	5.7	6.2
Travel from place to place	73.6	75.6	73.3	75.4	71.6
Other activities not elsewhere classified	10.7	14.5	12.7	9.9	8.9
Total	1,440.0	1,440.0	1,440.0	1,440.0	1,440.0
Secondary eating	23.9	20.7	27.9	22.9	20.6
Secondary drinking	66.3	76.2	66.8	62.2	70.4
Employed					
Sleep	493.4	520.3	498.0	490.1	490.9
Grooming	41.1	47.6	43.4	39.9	39.8
Other personal care	3.6	2.1	2.9	4.5	3.3
Meal preparation/cleanup	25.9	31.0	28.7	24.2	24.6
Other household activities	65.1	52.6	67.6	65.1	62.5
Caring for household members	26.2	27.6	29.1	24.1	25.6
Caring for non-household members	7.2	7.6	6.6	7.7	7.2
Paid work	325.2	307.7	314.9	331.3	330.5
Education	9.9	32.6	13.7	8.1	6.5
Grocery shopping	5.4	7.4	6.0	4.8	5.4
Other purchases	21.9	33.7	22.6	21.7	20.8
Government and civic activities	0.3	0.4	0.3	0.4	0.3
Primary eating and drinking	66.8	63.2	69.2	66.6	64.1
Activities associated with eating	0.1	0.7	0.2	0.1	0.1
Watching TV	129.6	92.4	114.3	134.0	144.5

Appendix table 5

Time spent in various activities, on an average day over 2006-08 (minutes) by BMI group and employment status, age 20 and over, total population and by employment status—continued

	Total population	Underweight	Normal weight	Overweight	Obese
Using PC	17.3	12.1	17.3	15.8	19.6
Other socializing and leisure	74.6	70.8	76.7	73.2	73.9
Sports and exercise	15.9	13.5	17.5	16.7	12.9
Watching sports	2.1	0.4	1.7	2.7	1.8
Other sports activities	0.1	0.0	0.0	0.1	0.1
Religious and volunteer activities	14.0	10.9	13.9	13.5	15.0
Phone calls and emails	4.7	7.1	5.6	4.4	4.0
Travel from place to place	81.2	89.9	80.3	83.2	79.3
Other activities not elsewhere classified	8.2	8.6	9.4	7.8	7.4
Total	1,440.0	1,440.0	1,440.0	1,440.0	1,440.0
Secondary eating	24.4	19.9	28.2	23.7	20.9
Secondary drinking	72.8	81.1	74.8	67.5	77.1
Not employed					
Sleep	542.2	554.6	536.3	540.7	550.5
Grooming	35.8	38.1	37.5	34.7	34.9
Other personal care	10.7	3.5	10.0	10.0	12.9
Meal preparation/cleanup	47.8	46.9	51.2	45.4	46.4
Other household activities	107.9	107.7	115.5	111.0	94.7
Caring for household members	32.1	37.9	39.8	26.1	29.5
Caring for non-household members	13.4	12.4	12.2	14.6	13.5
Paid work	7.0	8.5	7.3	6.1	7.6
Education	13.4	33.1	17.9	9.6	11.0
Grocery shopping	7.9	8.5	8.2	7.0	8.4
Other purchases	28.8	22.4	28.6	29.6	28.5
Government and civic activities	0.8	1.0	0.5	0.6	1.4
Primary eating and drinking	72.1	69.2	74.8	73.8	67.2
Activities associated with eating	0.2	0.0	0.3	0.1	0.2
Watching TV	233.6	211.2	212.6	233.5	260.9
Using PC	28.9	20.2	26.1	29.0	32.8
Other socializing and leisure	135.1	150.3	129.5	143.9	130.2
Sports and exercise	16.5	9.1	19.9	18.3	10.7
Watching sports	1.2	0.3	1.4	1.4	0.8
Other sports activities	0.0	0.0	0.0	0.0	0.0
Religious and volunteer activities	21.7	18.4	22.5	23.4	18.9
Phone calls and emails	9.5	7.4	9.7	8.6	10.6
Travel from place to place	57.6	57.4	58.8	57.5	56.5
Other activities not elsewhere classified	15.7	22.1	19.3	15.0	11.9
Total	1,440.0	1,440.0	1,440.0	1,440.0	1,440.0
Secondary eating	22.9	21.9	27.3	20.9	20.0
Secondary drinking	52.6	69.9	50.3	50.1	57.2

Note: A primary activity refers to an individual's main activity. Height and weight are self-reported. Those employed may or may not have engaged in paid work on their diary day. Sleep is 0101xx; Grooming is 0102xx; Other personal care is 0103xx and 0104xx and 019999; Meal preparation and cleanup is 0202xx; Other household activities are all 02xxxx activities except 0202xx and 020904; Caring for household members is 03xxxx; caring for nonhousehold members is 04xxxx; Paid work is all 05xxxx activities except 050202; education is 06xxxx; Grocery shopping is 070101; other purchases are all 07xxxx activities except 070101, 08xxxx, and 09xxxx; Government and civic activities are 10xxxx; Primary eating & drinking includes Eating and drinking (110101 and 110199), Eating and drinking not elsewhere classified (119999), and Eating and drinking as part of job (050202). Activities associated with eating are 110281 and 110289; Watching TV is 120303 and 120304; PC time is 020904, 120307, and 120308, and 1501010; Other socializing and leisure is all 12xxxx activities except 120303 and 120304; Sports and exercise is 1301xxx; Watching sports is 1302xx; Other sports activities is 1303xx; Religious and Volunteer activities is 14xxxx and 15xxxx; Telephone calls and emails is 1601xx and 169999; Travel from place to place is 18xxxx; and Other activities n.e.c. (not elsewhere classified) is 50xxxx. Data refer to persons 20 years or older. Pregnant women not included in estimates. Underweight is BMI < 18.5, 18.5 ≤ BMI < 25.0 is Normal weight, 25.0 ≤ BMI < 30.0 is Overweight, 30.0 ≤ BMI is Obese.

Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Appendix table 6

Time spent in various activities, on an average day over 2006-08 (minutes) by self-reported general health status and gender, age 20 and over

	Total population	Excellent	Very good	Good	Fair	Poor
Total population						
Sleep	509.1	493.7	500.1	512.0	536.5	577.8
Grooming	39.4	41.0	40.8	39.0	37.1	33.2
Other personal care	5.9	4.3	3.5	4.7	9.6	31.0
Meal preparation/cleanup	33.0	31.0	32.1	34.4	40.4	34.3
Other household activities	78.9	78.0	79.0	80.2	84.6	60.7
Caring for household members	28.1	32.8	31.8	28.6	21.5	15.9
Caring for non-household members	9.2	8.4	9.0	9.2	9.9	10.6
Paid work	222.6	261.1	248.0	220.0	150.8	49.8
Education	11.0	16.3	10.7	11.1	6.9	1.6
Grocery shopping	6.2	5.9	6.3	6.5	6.0	4.9
Other purchases	24.1	25.3	24.5	23.6	22.5	27.6
Government and civic activities	0.5	0.3	0.3	0.6	0.5	1.1
Primary eating and drinking	68.5	70.8	70.6	67.0	64.1	61.0
Activities associated with eating	0.2	0.2	0.2	0.1	0.1	0.1
Watching TV	163.1	121.5	141.3	170.4	215.7	291.6
Using PC	21.0	18.9	21.0	21.8	21.1	20.3
Other socializing and leisure	94.1	89.2	87.6	92.3	108.7	131.9
Sports and exercise	16.1	23.6	17.4	12.7	10.0	6.4
Watching sports	1.8	1.6	2.3	1.6	1.0	0.8
Other sports activities	0.0	0.0	0.1	0.0	0.1	0.0
Religious and volunteer activities	16.5	16.3	17.8	15.2	15.8	15.5
Phone calls and emails	6.3	5.9	6.2	6.5	6.5	7.6
Travel from place to place	73.6	82.1	79.2	72.1	58.4	45.3
Other activities not elsewhere classified	10.7	11.8	10.2	10.0	11.9	10.8
Total	1,440.0	1,440.0	1,440.0	1,440.0	1,440.0	1,440.0
Secondary eating	23.9	25.4	24.6	23.9	21.5	19.8
Secondary drinking	66.3	61.9	70.2	66.8	63.5	56.2
Men						
Sleep	505.8	488.5	494.7	509.3	537.4	573.8
Grooming	32.6	33.5	33.5	31.9	32.0	26.8
Other personal care	5.0	5.6	2.7	2.6	10.7	22.7
Meal preparation/cleanup	18.8	17.6	18.3	18.3	22.2	20.2
Other household activities	66.4	64.5	67.4	66.0	70.9	50.2
Caring for household members	18.4	19.1	21.0	18.0	12.3	12.5
Caring for non-household members	7.4	5.9	7.5	8.2	7.2	6.8
Paid work	266.0	310.9	297.2	264.8	186.0	58.8
Education	8.3	13.4	7.1	7.6	7.1	1.9
Grocery shopping	4.3	3.9	3.8	4.9	4.8	4.6
Other purchases	18.7	18.5	18.4	18.6	17.8	25.7
Government and civic activities	0.5	0.3	0.2	0.7	0.8	0.3
Primary eating and drinking	70.4	72.6	73.3	68.6	65.2	64.7
Activities associated with eating	0.1	0.2	0.1	0.1	0.2	0.1
Watching TV	178.0	134.7	154.9	186.5	230.0	347.8

—continued

Appendix table 6

Time spent in various activities, on an average day over 2006-08 (minutes) by self-reported general health status and gender, age 20 and over—continued

	Total population	Excellent	Very good	Good	Fair	Poor
Using PC	23.4	21.6	23.8	25.0	23.3	19.3
Other socializing and leisure	89.0	85.3	81.0	88.8	106.1	120.1
Sports and exercise	21.0	28.4	23.1	17.8	14.5	8.3
Watching sports	2.1	1.6	2.4	2.1	1.6	1.7
Other sports activities	0.1	0.1	0.1	0.1	0.1	0.0
Religious and volunteer activities	14.3	14.4	16.1	12.4	13.1	14.1
Phone calls and emails	3.1	3.1	3.4	2.8	3.0	3.6
Travel from place to place	76.6	84.2	81.7	75.5	63.2	47.3
Other activities not elsewhere classified	9.7	12.0	8.3	9.5	10.7	8.7
Total	1,440.0	1,440.0	1,440.0	1,440.0	1,440.0	1,440.0
Secondary eating	23.3	26.0	24.0	20.9	22.2	23.3
Secondary drinking	62.7	59.8	62.7	65.8	56.6	61.8
Women						
Sleep	512.4	498.8	505.2	514.6	535.7	581.3
Grooming	46.2	48.2	47.8	45.7	41.7	38.7
Other personal care	6.7	3.1	4.2	6.6	8.6	38.2
Meal preparation/cleanup	47.2	44.1	45.2	49.3	56.6	46.6
Other household activities	91.5	91.3	90.0	93.4	96.7	69.9
Caring for household members	37.9	46.0	41.9	38.3	29.7	18.8
Caring for non-household members	10.9	10.9	10.5	10.1	12.3	13.9
Paid work	179.3	212.5	201.5	178.4	119.6	42.1
Education	13.7	19.0	14.1	14.5	6.7	1.5
Grocery shopping	8.1	7.8	8.7	8.1	7.1	5.2
Other purchases	29.5	31.9	30.4	28.2	26.7	29.3
Government and civic activities	0.5	0.2	0.4	0.5	0.3	1.8
Primary eating and drinking	66.6	69.1	68.0	65.6	63.1	57.8
Activities associated with eating	0.2	0.2	0.2	0.2	0.1	0.0
Watching TV	148.3	108.6	128.5	155.5	203.2	242.9
Using PC	18.6	16.3	18.4	18.9	19.1	21.3
Other socializing and leisure	99.2	93.0	93.8	95.6	111.1	142.1
Sports and exercise	11.2	18.8	12.1	8.0	6.1	4.7
Watching sports	1.6	1.6	2.2	1.1	0.5	0.0
Other sports activities	0.0	0.0	0.0	0.0	0.0	0.0
Religious and volunteer activities	18.7	18.0	19.4	17.9	18.1	16.8
Phone calls and emails	9.5	8.6	8.8	9.9	9.6	11.1
Travel from place to place	70.7	80.2	76.9	69.0	54.3	43.6
Other activities not elsewhere classified	11.6	11.7	11.9	10.4	13.1	12.5
Total	1,440.0	1,440.0	1,440.0	1,440.0	1,440.0	1,440.0
Secondary eating	24.6	24.9	25.2	26.6	20.9	16.8
Secondary drinking	69.8	64.0	77.2	67.7	69.6	51.3

Note: A primary activity refers to an individual's main activity. General health self-reported. Sleep is 0101xx; Grooming is 0102xx; Other personal care is 0103xx and 0104xx and 019999; Meal preparation and cleanup is 0202xx; Other household activities are all 02xxxx activities except 0202xx and 020904; Caring for household members is 03xxxx; caring for nonhousehold members is 04xxxx; Paid work is all 05xxxx activities except 050202; education is 06xxxx; Grocery shopping is 070101; other purchases are all 07xxxx activities except 070101, 08xxxx, and 09xxxx; Government and civic activities are 10xxxx; Primary eating & drinking includes Eating and drinking (110101 and 110199), Eating and drinking not elsewhere classified (119999), and Eating and drinking as part of job (050202). Activities associated with eating are 110281 and 110289; Watching TV is 120303 and 120304; PC time is 020904, 120307, and 120308, and 1501010; Other socializing and leisure is all 12xxxx activities except 120303 and 120304; Sports and exercise is 1301xxx; Watching sports is 1302xx; Other sports activities is 1303xx; Religious and Volunteer activities is 14xxxx and 15xxxx; Telephone calls and emails is 1601xx and 169999; Travel from place to place is 18xxxx; and Other activities n.e.c. (not elsewhere classified) is 50xxxx. Data refer to persons 20 years or older.

Source: 2006-08 Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module data.

Average time spent in various activities on an average day over 2006-08 for adults age 19 and over in households with children or youth, by school/daycare meal obtainment

	Grocery shopping over population	Grocery shopping—those who engaged in grocery shopping	Food prep/ cleanup	House-work	Child-care	Paid work	Sleep
<i>Average minutes per day spent in selected activities</i>							
Obtain school/daycare meals							
Persons in households with members under age 19	6.2	43.8	39.6	113.0	66.0	260.6	503.5
Households with children 5 years and under	6.3	44.5	41.5	111.3	97.7	257.5	505.2
Households with children 6-11	6.5	44.3	43.8	121.7	76.2	251.0	503.7
Households with children 12-18	6.3	43.1	39.7	116.8	47.4	256.5	504.4
Persons in households with members under age 19							
Income <130% poverty threshold	7.4	45.5	54.0	138.7	77.5	176.9	532.0
130% < income < 185% poverty threshold	6.1	51.0	41.5	118.3	61.7	266.9	509.5
185% poverty threshold < income	5.9	41.1	33.7	101.5	63.3	295.2	488.8
Persons in households with members under age 19							
Obtain SNAP/Food Stamps	6.8	48.7	54.7	133.3	89.6	152.1	537.2
Do not obtain SNAP/Food Stamps	6.1	42.9	37.5	110.0	62.9	276.2	498.9
Persons in households with members under age 19							
One adult in household	6.3	43.8	43.9	115.8	76.9	243.2	514.6
More than one adult in household	6.2	43.8	39.1	112.7	64.8	262.6	502.3
Persons in households with members under age 19							
One child	5.3	43.0	33.2	100.6	42.2	271.0	507.3
2-3 children	6.7	43.9	41.1	116.9	75.2	261.0	502.0
4 or more children	6.7	45.8	54.6	135.9	97.9	216.9	499.2

—continued

Appendix table 7

Average time spent in various activities on an average day over 2006-08 for adults age 19 and over in households with children or youth, by school/daycare meal obtainment—continued

	Grocery shopping over population	Grocery shopping—those who engaged in grocery shopping	Food prep/ cleanup	House-work	Child-care	Paid work	Sleep
Do not obtain school/daycare meals	<i>Average minutes per day spent in selected activities</i>						
Persons in households with Members under age 19	6.6	47.2	38.7	112.5	75.0	238.2	506.0
Households with children 5 years and under	6.6	48.7	42.1	110.9	117.8	222.6	513.9
Households with children 6-11	5.9	43.6	43.4	126.3	77.8	232.6	503.6
Households with children 12-18	6.7	46.2	37.3	115.1	34.8	252.4	497.4
Persons in households with Members under age 19							
Income <130% poverty threshold	6.0	53.1	46.7	118.6	71.3	177.4	546.6
130% < income < 185% poverty threshold	6.9	58.6	36.2	105.0	72.5	255.0	522.4
185% poverty threshold < income	6.6	43.7	36.6	111.6	76.9	254.1	491.0
Persons in households with members under age 19							
Obtain Food Stamps	6.9		53.7	127.1	97.2	139.0	561.8
Do not obtain Food Stamps	6.6	46.3	37.5	111.4	73.2	246.7	501.1
Persons in households with Members under age 19							
One adult in household	7.3	43.6	36.4	105.8	64.0	218.3	522.0
More than one adult in household	6.6	47.5	38.9	113.0	75.8	239.6	504.8
Persons in households with Members under age 19							
One child	6.9	48.2	34.4	106.0	60.2	240.9	508.7
2-3 children	6.4	45.7	40.5	114.7	85.6	238.7	503.3
4 or more children	6.2	52.1	63.8	153.9	114.5	207.3	504.3

Note: Grocery shopping is 070101.

Food preparation is 0202xx.

Housework is all 02xx activities (including food preparation).

Childcare is 0301xx, 0302xx, 0303xx, 0401xx, 0402xx, and 0403xx.

Paid Work includes all of 05xxxx except 050202.

Sleeping includes 010101 and 010102.

Related travel times are not included in any of the activities.

Source: Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module.

Appendix table 8

Average time spent in various activities on an average day over 2006-08 for adults age 19 and over (usual/not usual grocery shopper/meal preparer) in households with children or youth, by school/daycare meal obtainment

	Average minutes per day spent in selected activities													
	Grocery shopping		Grocery shopping—those who shopped	Food prep/ cleanup		Housework		Childcare		Paid work		Sleep		
	usual shop- per	not usual shop- per	usual shopper	usual food pre- parer	not usual food pre- parer	usual food pre- parer	not usual food pre- parer	usual food pre- parer	not usual food pre- parer	usual food pre- parer	not usual food pre- parer	usual food pre- parer	not usual food pre- parer	
Obtain school/daycare meals														
Persons in households with members under age 19	8.2	2.3	44.9	54.1	12.5	138.1	66.2	80.3	39.3	222.7	331.6	504.6	501.5	
Households with children 5 years and under	8.1	2.3	47.6	54.8	14.1	135.1	62.5	115.1	61.9	213.2	348.6	509.7	496.0	
Households with children 6-11	8.5	2.3	45.0	59.0	13.3	146.8	71.6	91.6	45.3	211.8	329.2	505.3	500.5	
Households with children 12-18	8.2	2.7	43.0	56.8	10.8	146.8	66.1	60.3	25.3	222.1	314.9	501.6	509.0	
Persons in households with Members under age 19														
Income <130% poverty threshold	8.5	3.4	46.4	69.3	11.5	163.1	71.2	90.7	41.1	143.1	270.5	530.7	535.6	
130% < income < 185% poverty threshold	7.4	3.0	51.8	56.0	12.1	146.4	61.2	77.8	29.0	221.7	358.5	510.5	507.5	
185% poverty threshold < income	8.2	1.9	42.5	46.5	13.1	123.8	65.2	76.8	41.4	261.7	349.8	490.0	486.7	
Persons in households with Members under age 19														
Obtain SNAP/Food Stamps	7.9	2.7	50.0	67.2	14.7	153.3	68.9	102.1	49.2	120.7	253.7	533.3	549.6	
Do not obtain SNAP/Food Stamps	8.1	2.3	43.9	51.9	12.3	135.3	65.8	76.9	38.3	240.1	339.4	499.9	497.0	
Persons in households with members under age 19														
One adult in household	6.4	--	43.9	44.9	--	118.8	--	77.6	--	242.9	--	512.6	--	
More than one adult in Household	8.5	2.3	45.0	55.7	12.5	141.4	66.5	80.7	39.0	219.2	332.5	503.2	500.8	
Persons in households with Members under age 19														
One child	6.9	1.9	43.9	45.0	12.0	122.3	61.7	50.5	27.2	247.0	314.2	507.3	507.4	
2-3 children	8.9	2.5	45.5	56.0	13.1	141.8	70.2	91.3	44.8	218.0	341.8	503.7	498.7	
4 or more children	8.1	3.2	43.6	75.0	10.6	172.6	56.8	119.2	52.1	162.7	333.4	500.4	496.5	

—continued

Appendix table 8

Average time spent in various activities on an average day over 2006-08 for adults age 19 and over (usual/not usual grocery shopper/meal preparer) in households with children or youth, by school/daycare meal obtainment—continued

	Average minutes per day spent in selected activities													
	Grocery shopping		Grocery shopping—those who shopped		Food prep/cleanup		Housework		Childcare		Paid work		Sleep	
	usual shopper	not usual shopper	usual shopper	not usual food preparer	usual food preparer	not usual food preparer	usual food preparer	not usual food preparer	usual food preparer	not usual food preparer	usual food preparer	not usual food preparer	usual food preparer	not usual food preparer
Do not obtain school/daycare meals														
Persons in households with members under age 19	8.6	3.0	47.4	52.5	15.4	138.8	67.8	92.3	45.5	193.4	314.3	508.9	500.8	
Households with children 5 years and under	8.3	3.2	49.0	55.4	17.9	134.8	67.5	141.7	74.7	167.2	322.9	519.1	504.7	
Households with children 6-11	7.9	2.1	45.6	58.9	15.8	154.2	76.4	94.0	49.1	185.4	316.8	505.6	500.2	
Households with children 12-18	9.1	2.8	46.6	51.3	16.1	144.2	71.0	42.6	23.0	215.4	308.6	500.7	492.5	
Persons in households with Members under age 19														
Income <130% poverty threshold	6.9	3.5	51.0	54.9	27.3	134.0	82.3	79.2	52.5	158.0	223.3	546.4	547.1	
130%<income<185% poverty threshold	8.0	4.7	53.0	54.6	7.6	140.7	49.5	97.6	33.5	181.8	368.7	528.7	512.6	
185% poverty threshold < income	9.0	2.6	44.9	50.3	14.5	137.8	69.2	95.2	47.3	209.0	326.9	494.3	485.7	
Persons in households with Members under age 19														
Obtain SNAP/Food Stamps	7.9	--	--	53.6	--	131.4	--	104.3	--	138.7	--	560.5	--	
Do not obtain SNAP/Food Stamps	8.7	3.0	46.7	52.4	13.2	139.5	65.3	91.1	43.8	199.0	325.0	503.7	496.8	
Persons in households with Members under age 19														
One adult in household	7.5	--	43.7	37.0	--	107.0	--	65.0	--	217.3	--	523.5	--	
More than one adult in household	8.8	3.0	47.9	54.3	15.3	142.5	67.6	95.5	45.4	190.6	315.1	507.3	500.9	
Persons in households with Members under age 19														
One child	8.9	3.2	48.3	46.0	14.2	130.0	64.5	76.1	32.8	208.4	297.2	508.2	509.6	
2-3 children	8.3	3.0	45.6	56.3	13.4	142.9	66.3	104.7	53.1	184.4	331.7	509.3	493.1	
4 or more children	9.0	0.7	--	80.0	41.3	188.0	106.9	134.2	87.3	130.0	313.8	513.0	492.3	

-- = suppressed due to small cell size (base is less than 1.2 million)

Note: "Usual shopper" includes those who answered question on whether they usually grocery shopped for the household with "Yes" or "Split equally."

"Usual food preparer" includes those who answered question on whether they usually did food preparation for the household with "Yes" or "Split equally."

Grocery shopping is 070101.

Food preparation is 0202xx.

Housework is all 02xx activities (including food preparation).

Childcare is 0301xx, 0302xx, 0303xx, 0401xx, 0402xx, and 0403xx.

Paid Work includes all of 05xxxx except 050202.

Sleeping includes 010101 and 010102.

Related travel times are not included in any of the activities.

Source: Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module.

Appendix table 9a

Average time spent in various activities on an average day over 2006-08 for adults age 19 and over (employed only) in households with children or youth, by school/daycare meal obtainment

Average minutes per day spent in selected activities													
Grocery shopping		Grocery shopping—those who shopped	Food prep/cleanup		Housework		Childcare		Paid work		Sleep		
usual shopper	not usual shopper	usual shopper	usual food preparer	not usual food preparer	usual food preparer	not usual food preparer	usual food preparer	not usual food preparer	usual food preparer	not usual food preparer	usual food preparer	not usual food preparer	
Employed only													
Obtain school/daycare meals													
Persons in households with members under age 19													
	7.3	2.1	43.0	43.8	11.5	113.3	62.7	68.3	37.7	301.8	372.3	494.1	490.9
Households with children 5 years and under	7.6	2.0	46.2	41.4	13.0	105.5	59.2	98.1	58.2	295.6	385.7	497.5	487.6
Households with children 6-11	7.2	2.1	42.4	45.9	12.5	118.8	67.5	75.3	43.3	297.0	364.4	495.6	492.2
Households with children 12-18	7.2	2.3	41.0	45.8	9.1	122.0	61.9	49.4	22.8	304.8	363.3	490.3	497.2
Persons in households with Members under age 19													
income <130% poverty threshold	7.5	3.7	43.2	54.8	8.3	126.0	60.9	68.0	35.5	266.5	360.3	509.2	519.5
130%<income<185% poverty threshold	5.9	3.2	44.8	47.8	11.6	121.5	60.9	68.5	26.2	294.2	384.0	506.5	500.9
185% poverty threshold<income	7.6	1.7	42.7	39.8	12.5	107.9	63.8	68.8	41.0	312.8	374.9	487.4	480.3
Persons in households with Members under age 19													
Obtain Food Stamps	6.9	3.6	--	50.8	10.9	111.2	59.1	81.3	35.9	247.3	369.2	510.0	521.3
Do not obtain Food Stamps	7.3	2.0	42.5	43.1	11.6	113.5	62.7	67.0	37.8	307.3	372.5	492.5	489.0
Persons in households with Members under age 19													
One adult in household	5.9	--	42.8	38.0	--	104.2	--	68.9	--	316.5	--	497.0	--
More than one adult in household	7.5	2.1	43.0	44.8	11.5	114.9	62.8	68.3	37.5	299.1	372.2	493.6	490.8
Persons in households with Members under age 19													
One child	6.2	1.9	42.3	39.4	11.3	104.7	57.9	47.4	28.1	316.4	362.6	500.0	493.5
2-3 children	8.1	2.3	43.8	45.6	12.0	116.8	67.2	77.9	42.0	295.6	376.0	492.7	489.5
4 or more children	6.3	0.7	--	50.4	9.1	127.1	48.7	94.4	46.9	278.6	386.9	476.1	489.8

—continued

Appendix table 9a

Average time spent in various activities on an average day over 2006-08 for adults age 19 and over (employed only) in households with children or youth, by school/daycare meal obtainment—continued

	Average minutes per day spent in selected activities													
	Grocery shopping		Grocery shopping—those who shopped	Food prep/ cleanup		Housework		Childcare		Paid work		Sleep		
	usual shopper	not usual shopper	usual shopper	usual food preparer	not usual food preparer	usual food preparer	not usual food preparer	usual food preparer	not usual food preparer	usual food preparer	not usual food preparer	usual food preparer	not usual food preparer	
Employed only														
Do not obtain school/daycare meals														
Persons in households with														
Members under age 19	7.8	2.7	44.4	43.5	14.6	117.9	66.6	72.2	46.6	280.2	356.9	495.3	485.8	
Households with children 5 years and under	7.4	2.8	45.4	43.6	16.5	106.6	64.8	117.3	74.6	270.1	354.3	500.2	494.0	
Households with children 6-11	7.1	1.9	41.7	45.2	14.4	126.7	74.1	73.9	48.9	268.5	354.6	497.1	485.6	
Households with children 12-18	8.2	2.7	45.2	44.5	16.4	127.1	70.9	31.5	24.7	292.4	360.2	490.5	474.8	
Persons in households with														
Members under age 19														
Income <130% poverty threshold	4.7	2.4	--	39.8	26.4	97.2	79.8	58.8	52.7	302.9	293.0	513.1	519.5	
130%<income<185% poverty threshold	7.7	5.2	--	43.6	8.5	120.5	48.7	64.6	36.3	262.7	430.5	523.8	498.8	
185% poverty threshold <income	8.4	2.4	42.9	43.8	13.8	120.5	68.7	75.6	48.2	279.4	355.7	487.0	475.0	
Persons in households with														
members under age 19														
Obtain Food Stamps	5.0	--	--	36.4	--	88.6	--	80.1	--	309.3	--	521.4	--	
Do not obtain Food Stamps	8.0	2.6	44.1	44.0	12.7	119.7	64.0	71.7	44.2	278.4	363.7	493.7	484.6	
Persons in households with														
members under age 19														
One adult in household	6.9	--	42.1	30.5	--	93.1	--	49.2	--	303.6	--	500.3	--	
More than one adult in household	7.9	2.8	44.7	45.1	14.5	120.9	66.4	75.0	46.6	277.3	357.1	494.7	485.8	
Persons in households with														
members under age 19														
One child	7.7	3.2	43.9	40.2	13.2	114.4	64.6	63.5	33.2	287.9	348.4	496.4	490.7	
2-3 children	8.1	2.5	45.0	46.2	12.4	119.7	63.1	79.6	54.0	273.0	367.3	494.4	481.3	
4 or more children	5.9	--	--	56.3	42.9	146.7	109.2	102.4	89.3	260.0	338.0	492.2	485.3	

Note: -- = suppressed due to small cell size (base is less than 1.2 million).

Employed persons may or may not have engaged in paid work on their diary day.

"Usual shopper" includes those who answered question on whether they usually grocery shopped for the household with "Yes" or "Split equally."

"Usual preparer" includes those who answered question on whether they usually did food preparation for the household with "Yes" or "Split equally."

Grocery shopping is 070101.

Food preparation is 0202xx.

Housework is all 02xx activities (including food preparation).

Childcare is 0301xx, 0302xx, 0303xx, 0401xx, 0402xx, and 0403xx.

Paid Work includes all of 05xxxx except 050202.

Sleeping includes 010101 and 010102.

Related travel times are not included in any of the activities.

Source: Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module.

Average time spent in various activities on an average day over 2006-08 for adults age 19 and over (not employed only) in households with children or youth, by school/daycare meal obtainment

	Average minutes per day spent in selected activities													
	Grocery shopping		Grocery shopping—those who shopped	Food prep/cleanup		Housework		Childcare		Paid work		Sleep		
	usual shopper	not usual shopper		usual food pre-parer	not usual food pre-parer	usual food pre-parer	not usual food pre-parer	usual food pre-parer	not usual food pre-parer	usual food pre-parer	not usual food pre-parer	usual food pre-parer	not usual food pre-parer	
Not employed only														
Obtain school/daycare meals														
Persons in households with members under age 19	10.9	3.6	49.3	82.0	20.1	205.2	93.4	112.5	51.2	8.4	21.6	533.1	582.4	
Households with children 5 years and under	9.3	4.0	51.0	87.9	23.7	208.3	90.7	157.0	93.3	9.4	31.9	539.6	568.0	
Households with children 6-11	11.7	3.8	50.1	90.7	20.2	213.9	107.4	130.9	61.8	6.9	25.8	528.8	572.0	
Households with children 12-18	11.2	4.4	47.2	85.3	21.5	211.0	91.7	88.8	40.8	7.2	18.6	531.0	581.1	
Persons in households with Members under age 19														
Income <130% poverty threshold	9.8	2.7	50.0	85.1	20.4	203.6	100.2	115.4	56.9	8.7	20.0	554.1	580.7	
130%<income<185% poverty threshold	12.4	--	--	80.1	17.7	219.9	65.0	105.2	62.6	8.2	55.9	522.4	585.4	
185% poverty threshold <income	11.8	4.0	42.1	79.5	20.6	202.5	83.5	116.6	46.5	8.3	13.7	503.2	571.9	
Persons in households with Members under age 19														
Obtain Food Stamps	8.8	--	50.9	82.0	--	191.6	--	121.0	--	5.4	--	554.6	--	
Do not obtain Food Stamps	11.4	4.4	47.7	82.4	19.0	210.1	94.9	110.9	43.4	9.7	20.0	525.3	573.9	
Persons in households with Members under age 19														
One adult in household	7.9	--	--	66.3	--	163.9	--	104.6	--	14.3	--	561.1	--	
More than one adult in household	11.4	3.7	49.6	84.4	19.9	211.6	95.4	113.8	51.4	7.5	22.3	528.8	578.6	
Persons in households with Members under age 19														
One child	9.6	1.7	48.9	64.3	16.3	182.2	85.7	60.9	21.6	10.1	15.0	531.9	592.9	
2-3 children	11.5	3.4	49.4	84.2	23.6	209.4	98.0	127.7	70.3	7.8	26.5	533.7	583.0	
4 or more children	10.8	--	--	108.0	--	233.7	--	152.4	--	7.4	--	533.0		

—continued

Appendix table 9b

Average time spent in various activities on an average day over 2006-08 for adults age 19 and over (not employed only) in households with children or youth, by school/daycare meal obtainment—continued

Average minutes per day spent in selected activities													
	Grocery shopping		Grocery shopping—those who shopped	Food prep/ cleanup		Housework		Childcare		Paid work		Sleep	
	usual shopper	not usual shopper	usual shopper	usual food preparer	not usual food preparer	usual food preparer	not usual food preparer	usual food preparer	not usual food preparer	usual food preparer	not usual food preparer	usual food preparer	not usual food preparer
Not employed only													
Do not obtain school/daycare meals													
Persons in households with Members under age 19	10.7	4.3	53.8	71.8	20.5	183.8	76.0	135.6	37.4	6.4	25.8	538.3	602.9
Households with children 5 years and under	9.9	6.0	54.7	73.9	31.4	179.1	92.7	179.9	74.8	5.6	35.6	548.7	602.4
Households with children 6-11	9.6	--	53.8	87.7	--	212.0	--	136.0	--	11.0	--	523.3	--
Households with children 12-18	11.8	3.3	49.8	69.6	14.5	190.2	71.6	72.5	13.5	7.3	21.3	528.1	591.0
Persons in households with Members under age 19													
Income <130% poverty threshold	9.5	--	--	70.5	--	171.6	--	100.1	--	9.6	--	580.6	--
130%<income<185% poverty threshold	9.0	--	--	78.9	--	185.4	--	170.4	--	3.5	--	539.5	--
185% poverty threshold <income	10.7	4.3	50.9	68.9	22.4	187.8	74.9	151.8	38.4	5.9	24.2	515.4	597.7
Persons in households with Members under age 19													
Obtain Food Stamps	10.4	--	--	67.0	--	164.7	--	123.1	--	5.9	--	590.9	--
Do not obtain Food Stamps	10.7	5.1	52.8	72.7	17.8	187.5	75.6	138.0	40.6	6.5	24.5	528.1	591.9
Persons in households with Members under age 19													
One adult in household	8.8	--	--	52.6	--	140.4	--	102.8	--	10.0	--	579.3	--
More than one adult in household	10.9	4.3	54.6	73.8	20.9	188.4	76.4	139.1	37.9	6.1	26.4	533.9	604.8
Persons in households with Members under age 19													
One child	12.6	3.1	58.6	61.1	19.3	170.2	64.1	108.3	30.7	3.5	26.0	538.6	609.8
2-3 children	8.7	6.4	46.8	76.2	22.2	188.7	93.9	154.3	45.6	8.8	27.7	539.0	594.0
4 or more children	--	--	--	102.5	--	227.1	--	164.3	--	7.1	--	532.6	--

Note: -- = suppressed due to small cell size (base is less than 1.2 million)

"Usual shopper" includes those who answered question on whether they usually grocery shopped for the household with "Yes" or "Split equally."
 "Usual food preparer" includes those who answered question on whether they usually did food preparation for the household with "Yes" or "Split equally."

Grocery shopping is 070101.

Food preparation is 0202xx.

Housework is all 02xx activities (including food preparation).

Childcare is 0301xx, 0302xx, 0303xx, 0401xx, 0402xx, and 0403xx.

Paid Work includes all of 05xxxx except 050202.

Sleeping includes 010101 and 010102.

Related travel times are not included in any of the activities.

Source: Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module.

Appendix table 10

Average time spent in selected activities on an average day over 2006-08, Body Mass Index (BMI), and general health, for teenagers (age 15-18) by household characteristics and school meal obtainment

	Food prep/ cleanup	House- work	Child- care	Paid work	Sleep	Educa- tion	Screen- time	Exercise & sports	BMI	General health
Obtain school meals	6.1	29.5	5.8	39.4	547.2	284.1	163.1	43.2	23.7	2.2
Income < 185% poverty threshold	6.7	32.7	4.2	36.3	563.6	232.3	197.2	40.2	25.2	2.4
Income ≤ 185% poverty threshold	6.2	28.1	5.5	45.0	544.0	296.7	152.5	41.1	23.0	2.2
Household obtaining SNAP ¹ / Food Stamps	--	--	--	--	--	--	--	--	--	--
Household not obtaining SNAP/ Food Stamps	5.9	29.2	5.7	40.6	545.3	288.9	159.1	42.7	23.7	2.2
Employed	3.8	27.0	6.7	114.7	533.8	254.8	134.5	29.3	23.5	2.2
Not Employed	7.3	30.7	5.3	3.0	553.7	298.3	177.0	50.0	23.7	2.2
Household with 1 adult with children	9.9	30.9	5.3	27.2	547.2	266.4	170.4	38.0	24.6	2.3
Household with 2 or more adults with children	5.5	29.2	5.8	41.6	547.2	287.2	161.8	44.2	23.5	2.2
Do not obtain school meals	6.0	34.7	11.2	46.6	560.3	206.6	192.3	46.0	23.3	2.2
Income < 185% poverty threshold	--	--	--	--	--	--	--	--	--	--
Income ≤ 185% poverty threshold	6.2	34.8	6.1	48.2	559.8	208.0	192.3	43.2	22.8	2.1
Household obtaining SNAP/ Food Stamps	--	--	--	--	--	--	--	--	--	--
Household not obtaining SNAP/ Food Stamps	5.8	33.1	8.9	46.5	566.8	203.7	192.2	45.4	23.3	2.2
Employed	6.5	36.6	4.9	138.6	542.4	150.0	158.6	48.1	23.3	1.9
Not employed	5.8	33.9	13.7	10.7	567.3	228.6	205.4	45.2	23.3	2.3
Household with 1 adult with children	7.2	37.5	20.5	53.9	576.9	172.4	186.1	25.9	23.0	2.3
Household with 2 or more adults with children	5.7	34.2	9.3	45.1	555.8	214.5	192.7	50.4	23.4	2.1

¹ SNAP = Supplemental Nutrition Assistance Program.

Note: -- = suppressed due to small cell size (base is less than 1.2 million). General health average score: 1 = excellent, 5 = poor.

Food preparation is 0202xx.

Housework is all 02xx activities (including food preparation).

Childcare is 0301xx, 0302xx, 0303xx, 0401xx, 0402xx, and 0403xx.

Paid Work includes all of 05xxxx except 050202.

Sleeping includes 010101 and 010102.

Education includes all 06xxxx.

Screentime is 020904+120303+120304+120307+120308+150101.

Exercise and sports includes 1301xx.

Related travel times are not included in any of the activities.

Source: Bureau of Labor Statistics American Time Use Survey and ERS Eating & Health Module.

Appendix—Technical information on calculation of estimates

All estimates presented in this report were calculated using the American Time Use Survey (ATUS) data and the Eating & Health Module (EH Module) data for 2006-08. The ATUS Respondent, Activity, Activity Summary, Roster, Who, and ATUS-Current Population Survey files were used, and the EH Module Respondent, Activity, Child, and Replicate Weights files were used. The dataset used contains 37,832 respondents, with a total of 753,604 activities.

All calculations were done using SAS 9.2. Estimation procedures outlined in the *ATUS User's Guide* (U.S. DOL BLS, 2010) and the *EH Module User's Guide* (Hamrick, 2010) were followed. In particular, the methodology used for calculating total time in secondary eating and drinking adjusting for overlap is presented in the *EH Module User's Guide* (p. 9). Averages were calculated as the mean. Standard errors were calculated according to Section 7.5 of the *ATUS User's Guide*. The EH Module Replicate Weights were used, either by directly programming the balanced repeated replication method or by using the PROC SURVEY procedures in SAS. A 90-percent level of confidence was used to determine whether estimates were statistically different. All differences between estimates discussed in the text are statistically different.

The ERS standard of suppressing estimates for cells with unweighted counts fewer than 80 was followed. Eighty observations, when weighted by the Eating & Health Module final weights, represents 1.2 million Americans age 15 or older. Estimates with cell sizes of fewer than 80 observations were considered too small to provide a reliable estimate. Bureau of Labor Statistics determined the threshold of 80 observations for estimates made with the Eating & Health Module data, which corresponds to the Bureau of Labor Statistics standard used in 2006 of a minimum of 1.2 million-person base for publishing estimates using the American Time Use Survey data.

Estimates for eating and drinking activities in the Eating Behavior sections are presented for those age 15 years old and over, as these estimates include the entire survey population. Estimates in the Health section are for age 20 and older, as the adult Body Mass Index applies to those age 20 and older. Estimates in the Meal Preparation and Grocery Shopping are either for adults (age 18 and older), for adults beyond high school age (age 19 and older), or for teenagers in school (age 15-18 and in school). Age 19 and older is used for the meals obtained at school analysis, as individuals age 18 can still be in high school and so can obtain meals at school.

NATIONAL AGRICULTURAL LIBRARY



1023023158



1023023158